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Clemson University



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recovery  
plan  
for the

# eastern timber wolf

VOLUME II





## DEPARTMENT OF WILDLIFE ECOLOGY

226 Russell Laboratories

University of Wisconsin - Madison

53706

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES SCHOOL OF NATURAL RESOURCES

18 March 1976

Mr. Ralph E. Bailey  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear ~~Mr. Bailey~~: *Ralph* :

I received your eastern timber wolf bulletin and turned it over to one of my staff members who has been working on coyotes. I felt that he was in a better position than I to comment.

I retrieved the bulletin the other day and find that comments have been long overdue. I am sorry we did not respond in time. In discussing the bulletin with him he had no major comments to make so our contribution would have been relatively minor. I am writing you this note to let you know that I did not take your request lightly, and regret that we could not have responded in a more positive manner. One of the major comments to come out of our discussion was the fact that in order to repatriate wolves a very large block of land would have to be closed to trapping and some kinds of hunting, particularly deer, which would be the primary prey base for the wolf. It is doubtful that hunters and landowners would agree. I hope that you can come up with a viable plan that will please most of the conservationists and biologists.

Sincerely yours,

Robert A. McCabe  
Chairman

RAMcC:ps





rrington  
man  
Fensterwald, Jr  
esel  
Shelton  
ington Director

March 25, 1976

Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Tecovery Team  
Post Office Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

We were shocked and amazed to read the proposals contained in the first draft of the Recovery Plan For the Eastern Timber Wolf as prepared by the Recovery Team appointed by the Secretary of the Interior.

Although on page 7 you state your "plan addresses itself to the four factors critical to the perpetuation of the Eastern Timber Wolf," you proceed to list objectives as "highly regulated management" and re-establishment.

Ironically, you state further, "Because wolves have survived for so long in Minnesota despite bounties and year-round hunting and trapping, there may be a question as to why any restrictions need now be placed on the taking of the wolf." And, you list the examples which may cause a change drastically as being all man-made projects.

The obvious clue to the "management" theory is set forth on page 12:

"123-43 Remove by hunting and trapping  
wolves in excess of the goal population."

You proceed with suggested rules and regulations for the "taking" of the wolves!

A mass transfer of the wolves from one region to another appears unacceptable because of possible genetic consequences as well as the likelihood of depleting local stocks.

We suggest as an alternative, keeping man out of the wolves' territory rather than claiming the land as man's territory and moving the wolves out.

Reg. Mgr.	Fish Grt. Lakes
Asst. Reg. Mgr.	Forestry
Auditor	Game
Bud. Exec.	Information
Asst. Dir. Inv.	Land
Engineer	Law
Const. Supt.	Public Affs.
	Records
Fire	Wildlife
Fish	
Fish-Const. Supt.	
File:	

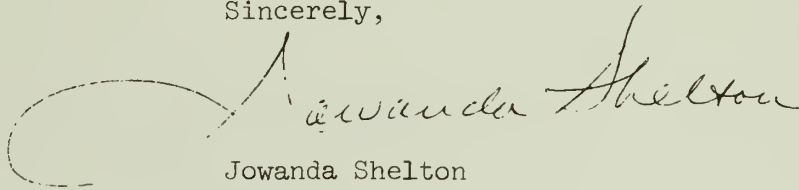


Mr. Bailey  
Page Two  
March 25, 1970

Millions of dollars could be saved -- in addition to the wolves -- by adopting a non-management alternative.

Placing the *Canis lupus lycaon* of eastern North America on the endangered species list would act as a deterrent to 'invading the wolves' territory in that man-made penalties appear to influence man's actions when respect for the creature's life does not.

Sincerely,

A handwritten signature in cursive script, reading "Jowanda Shelton". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

Jowanda Shelton  
Washington Director

JS:mhh



Ministry of  
Natural  
Resources

P.O. Box 50  
Maple, Ontario L0J 1E0

Our file number  
Your file number

March 22, 1976

Mr. Ralph Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Mich. 49855

Dear Sir:

Firstly, I would like to commend your efforts in attempting to maintain a viable population of free-ranging wolves in an area that will be subject to increasing disruption by humans in the immediate and distant future. Similar judicious action on behalf of other species within the recent past would certainly have reduced the number of animals currently faced with extinction. Your proposal seems feasible and appears to have considered most of the problems and potential problems. I would, however, like to make the following suggestions and emphasize the following points:-

1. Identification of Eastern Timber Wolf - as you pointed out, there is still some controversy regarding the taxonomy of wolves in Minnesota. On the basis of our work in Ontario C. l. lycaon is probably referable to the wolves in eastcentral Ontario and parts of south-central Quebec. The wolves in northern and north-western Ontario appear similar to those in Minnesota and are more like nubilus as suggested by Mech, or perhaps hudsonicus found further north in Ontario. This problem is not so important when discussing the maintenance of wolves in Minnesota but should be considered when discussing the re-establishment of the species in areas such as Maine and the Adirondacks. Presumably, the wolves that formerly inhabited these regions were members of the smaller C. l. lycaon.
2. The need for a comprehensive public relations program prior to any type of introduction cannot be over-emphasized. Our experience has shown that some anti-wolf people will grudgingly tolerate wolves if they are indigenous to an area, but the planting of wolves





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<http://archive.org/details/recoveryplanfore02bail>

age 2  
arch 22, 1976  
r. Ralph Bailey

by any official agency represents an unforgivable act. We continue to encounter this type of criticism in certain sections of the province where it was only rumored that wolves had been released, although actual releases were never conducted in the province.

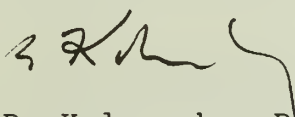
I wonder if it is desirable to try to maintain a density of 1 wolf/10 mi.<sup>2</sup>? A reduced density of 1/15-20 mi<sup>2</sup> would be easier to maintain and would probably result in less wolf-people conflicts. This may produce a more amenable situation with regard to all groups, both pro and con, and make the task of maintenance for perpetuity, easier. The problems of closing the deer season in order to sustain the wolf population appear especially difficult.

I'm not a caribou expert, but I suspect the habitat required by this species is not compatible with that of deer, and, possibly moose. The former is usually more abundant in mature forests, whereas, almost the opposite is true for the two latter species.

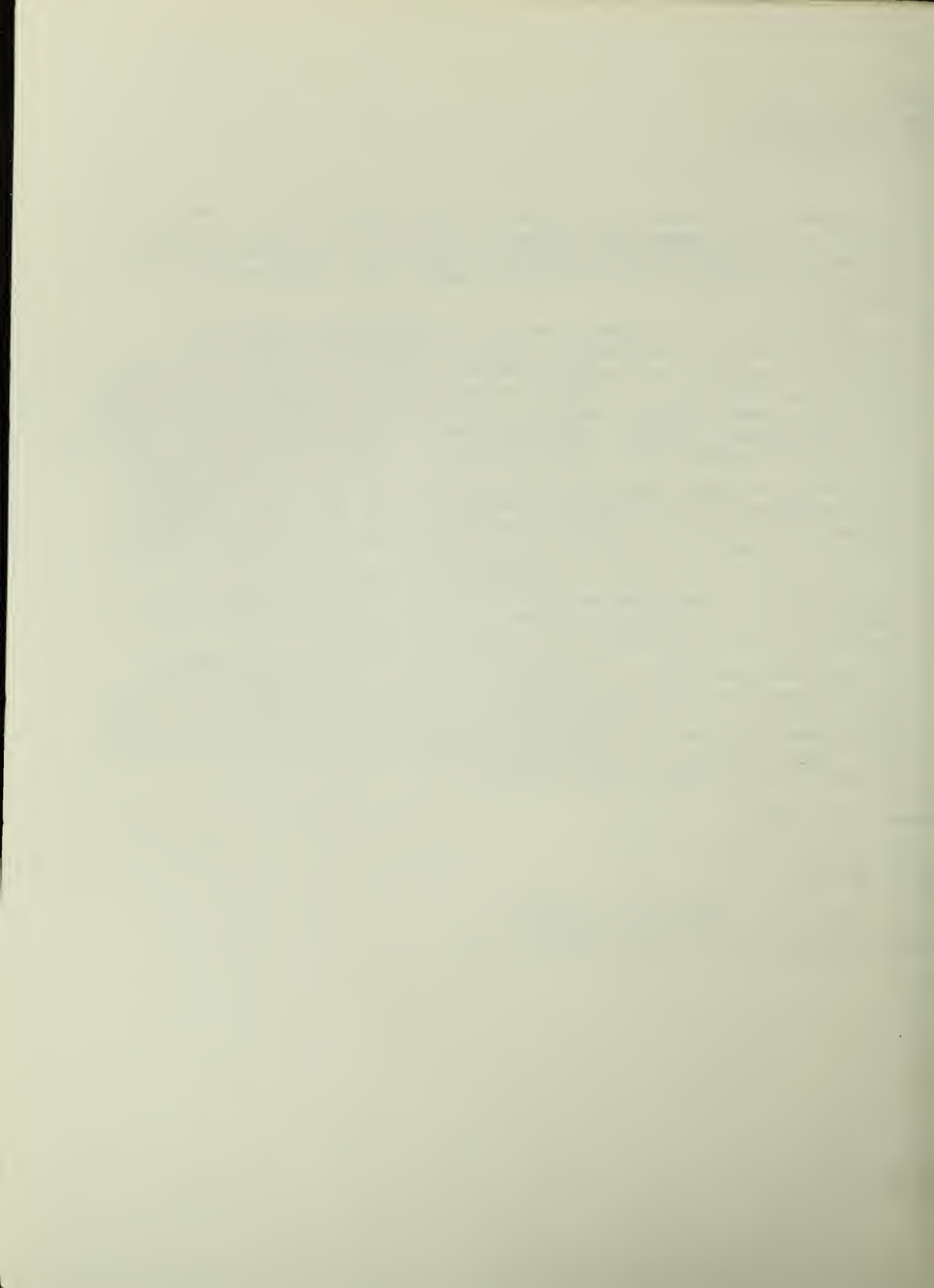
I concur with the Group's recommendation that the wolf in Minnesota be classified as threatened rather than endangered. The restrictions imposed by the term endangered preclude the possibility of any realistic management program.

It might be advisable to establish some form of compensation for farmers who lose livestock to wolves. Many farmers don't want wolves and therefore should not be asked to carry the cost of losses incurred by the species without some form of financial aid. Such a program has been in effect in Ontario for the past 3 years and has been quite successful.

rs very truly,



B. Kolenosky, Research Scientist  
h and Wildlife Research Branch



# Defenders OF WILDLIFE

March 12, 1976

Mr. Ralph E. Bailey  
Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Thank you for the draft report of the Recovery Plan for the Eastern Timber Wolf. We appreciate the opportunity to submit our comments.

The recommendation by the Recovery Team to reclassify the Eastern Timber Wolf (Canis lupus lycaon) as a threatened species runs counter to the basic assumptions of the Endangered Species Act of 1973. The Act was created to insure the protection of endangered and threatened species throughout the United States and the world. The underlying goal is not only to insure survival, but to insure to the extent possible, the restoration of endangered species to a point where they are no longer endangered or threatened. In this framework, the purpose of the Recovery Team is also to participate in the protection and restoration of a species to a point where the species is no longer endangered or threatened. Clearly, the proposal to de-list the last remnant population of wolves in the contiguous states is contrary to the mandate of the Recovery Team.

One objective of the Recovery Team is to "maintain and re-establish viable populations of the Eastern Timber Wolf in as much of its former range as is feasible." The areas to be investigated for re-establishment possibilities include Maine, the White Mountains, the Adirondack Forest Preserve, and certain sections of the Southern Appalachians. We concur that reintroduction in suitable areas is positive action to insure the conservation and restoration of a species. However, the program actions for background research, planning, consultation with local people, and public hearings, are not targeted until 1979 - the very same year the wolves would presumably be released in these areas. It is obvious that the delays in gathering research and obtaining local and administrative support would be detrimental to the long-range survival of the wolf.

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Moreover, our experience shows there would probably be much political and local opposition to the reintroduction of wolves in these areas, thus causing still more delays. We urge that preliminary reintroduction measures be forcefully initiated to determine if the above areas are indeed suitable ecosystems to support wolf populations. The Recovery Plan should devote far more discussion and emphasis to the plans for reintroduction, funding, education, and local action. The Recovery Plan should make forceful recommendations concerning those items. Unfortunately, the items seem to be included as afterthoughts to the counter-productive proposals to reducing the species to "threatened" status and condoning the killing of 220 wolves a year.

The Recovery Team's management program proposes to allow 100 wolves to be taken annually by public hunting and trapping in Zone 2, the 19,310-square mile Peripheral Range. Section 3(2) of the Endangered Species Act restricts regulated taking to the "extraordinary case" where population pressures cannot be otherwise relieved. No doubt the "extraordinary case" clause was prompted by a desire to insure that regulated taking would occur when there were no alternatives to such taking. However, the report does not indicate that other alternatives have been exhausted. The Team's taking proposal, then, does not conform to the intent of the Act and should be stricken from the plan.

Further, it is assumed by the Recovery Team that 60 additional wolves will be taken under the damage control program. We believe that the taking of an endangered or threatened species should be limited only to incidences involving direct threats to human health and safety. True, there may be some cases of conflict between wolves and livestock. However, to the extent that public land is involved, a livestock owner who has the privilege of grazing domestic livestock on public wildlife habitat must be willing to accept some losses from the wildlife as part of his cost of doing business on that land. On private land, control actions, for reasons other than human health and safety, must be limited to proven cases of livestock depredations and then should be dealt with individually by methods other than hunting and lethal trapping. Favored methods of dealing with depredations on livestock should be better livestock management, or livetrapping and transplanting.



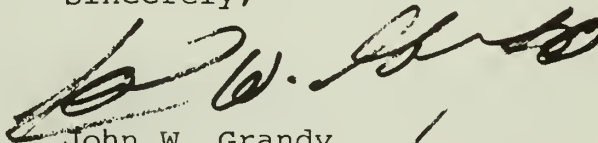
As to the illegal take of 60 wolves, it is ridiculous that the Recovery Team plans for, and in effect, encourages the taking of wolves illegally. This stems, in part, from the lack of law enforcement capabilities in wolf habitat ranges. Providing adequate law enforcement to protect wolves should be the highest priority under this program. Condoning illegal taking will only serve to encourage stockowners to kill any wolf in his territory under the assumption that wolves were depredating livestock. We wonder how the Team arrived at a figure of 60 wolves to be allowed to be taken illegally, and how the Team will insure that no more than 60 wolves will, in fact, be taken. There is no logic in encouraging illegal takes, and this provision contributes nothing to the goals and objectives of the Recovery Plan.

Again, we thank you for the opportunity to submit our comments. However, at this time, we view the draft report as being detrimental to the long-range survival of the Eastern Timber Wolf and inconsistent with the purpose and foundation of the Recovery Team and with the basic assumptions inherent in the Endangered Species Act of 1973. We hope the Recovery Plan can be strengthened accordingly.

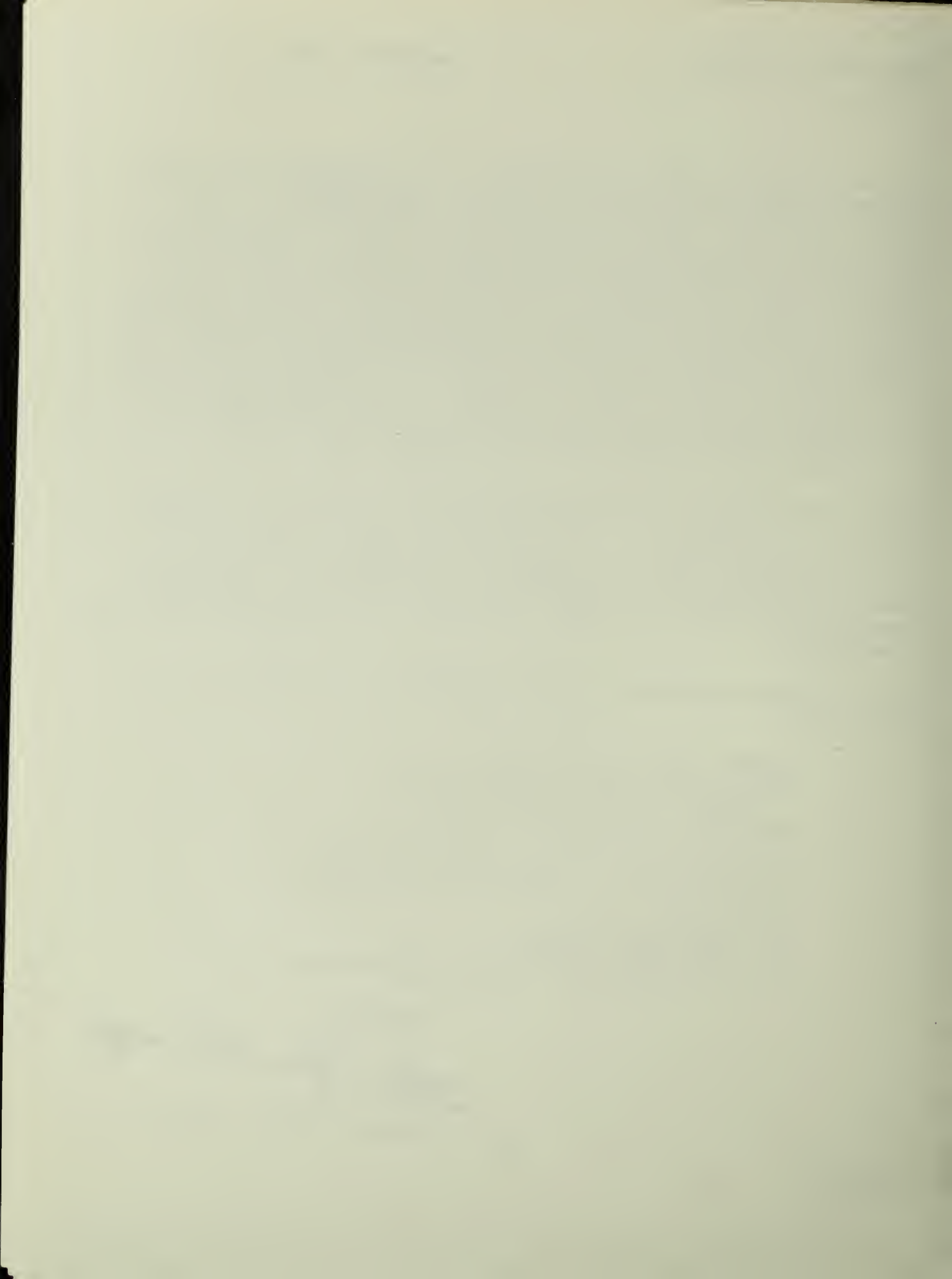
The following organizations also support the position taken in this letter:

Animal Welfare Institute  
Audubon Naturalist Society of the  
Central Atlantic States, Inc.  
Friends of the Earth  
International Fund for Animal Welfare  
National Parks & Conservation Association  
Sierra Club  
The Fund for Animals  
The Wilderness Society  
Wild Canid Survival and Research Center

Sincerely,



John W. Grandy  
Executive Vice President





# THE WILDLIFE SOCIETY

SUITE S176

3900 WISCONSIN AVE., N.W.

WASHINGTON, D. C. 20016

FRED G. EVENDEN  
*Executive Director*

JOHN L. SPINKS, JR.  
*Field Director*

PHONE: 202 383-2438

April 9, 1976

Dr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, MI 49855

Dear Ralph:

Field Director Mike Zagata and I have both studied the preliminary draft of the Recovery Plan for the Eastern Timber Wolf. We regret we could not do so sooner, and only hope that our comments, even at this late date, may be helpful to your recovery team in preparation of the next draft of your challenging assignment.

We offer some general comments and questions, which will be followed by several itemized editorial comments.

Although the drafted plan is comprehensive, we believe specific goals for wolf management need elaboration. It is not clear how many wolves are wanted, overall, nor where they are wanted.

With the plan goals clearly defined, then methods to achieve them need to be addressed more adequately in the draft.

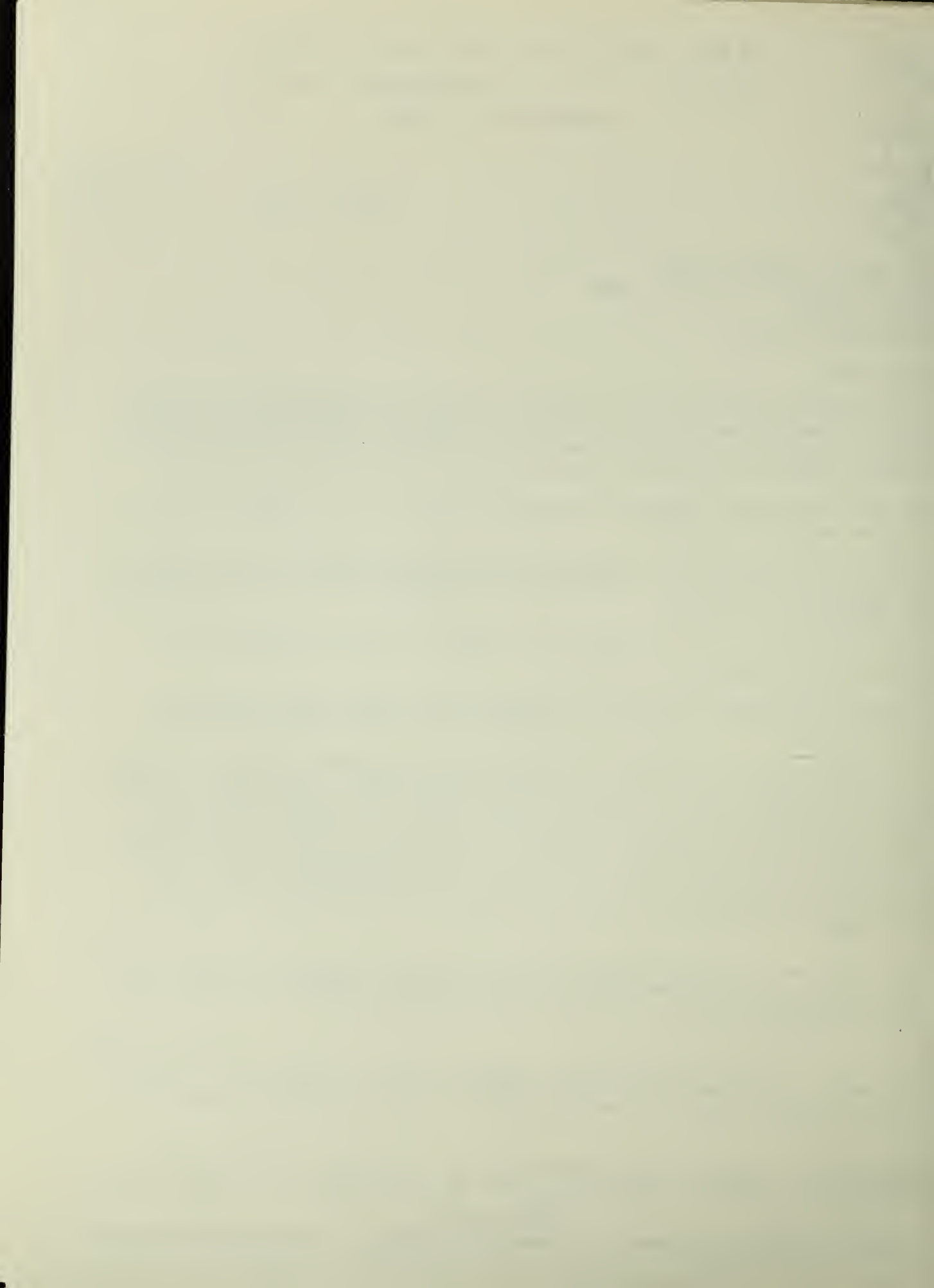
In order to determine the specific plan goals, some rather basic problems or questions need to be considered and elaborated upon in the plan's development.

- (1) What are the jurisdictional, administrative, and economic aspects of introducing wolves into territories not now occupied by wolves? For specific examples: Area 1 in Minnesota where increased conflicts with man will take place as the program succeeds; in Area B in northern Maine which is adjacent to the developed St. Lawrence Valley of Canada; in Area D, the Adirondack Preserve, where public ownership represents only about one-third of the preserve; and in area's E and F of the Appalachian chain where there are heavy human recreational uses. And would the plan have the blessings of the states and federal provincial agencies of Canada?
- (2) What type of continuing censuses of wolves and prey species will be established to serve as a basis for the future proposed management judgments and practices? The proposed areas are vast, and the timing of data gathering to apply one to the other, could be critical.
- (3) How do you intend to extensively improve the habitat over vast areas which are inherently less productive than your peripheral range by virtue of their successional vegetation stages and which traditionally have maintained low densities of animal populations?
- (4) Have you considered adequately the effects of removing the wolf from the Threatened or Endangered lists in the lower 48? Our concern is that total removal

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from the lists could lead to reduction of wolves through loss of "critical" habitat status now afforded by the Endangered Species Act.

(5) Finally, in these times of decreasingly-available tax dollars, we wonder about the economic, practical and biological merits of expanding wolf populations into vast areas that would require tremendous costs, not only in relocating wolves, but in continuing censuses, enforcement efforts, and meeting economic damage costs to be incurred. And in light of these costs, is there a practical need, or is it even biologically feasible, to expand wolf range into areas presently occupied successfully by coyotes and other large carnivores that have demonstrated incompatibility with wolves while at the same time apparently being more compatible than wolves to a closer association with man?

Our editorial comments, referenced to page (p), paragraph (pr) and line (l), follow:  
p.1, pr.2 -- What is status of management plan on adjacent lands since 1970?

p.1, pr.5, 1.4-5 -- Does the wolf need our concern when exploited populations result in stepped-up reproduction?

p.1, pr.5, 1.8-9 -- the reported dispersal capabilities would indicate that wolves can spread if the habitat and human factors are correct.

p.2, pr.1 -- Predator-prey relationships are left unclear here.

p.2, pr.4, 1.1 -- For reasons previously stated, the future plan probably should be limited to Minnesota and nearby proven habitat.

p.2, pr.4, last line -- Van Ballenberghe citation not in Appendix E, or the author sequences are in error.

p.3, pr.1 -- The 24,000 square mile figure is less than the three areas given near the end of the paragraph.

p.3, pr.2, 3, 4 -- It is puzzling why wolves would be denser in peripheral than primary range (13 sq. mi. vs. 17 sq. mi.).

p.3, pr.5 -- we agree.

p.4, pr.4, last sentence -- but the condition probably never exists!

p.4, pr.5(2) -- this is one reason for eliminating most of the potential sites for reestablishment. Low residential densities are offset by high recreation uses.

(3) delete. (4) to read: adequate understanding of wolf ecology to provide a basis for ecologically sound management.

p.5, pr.2(2) -- (a) remove livestock from public lands, in the interest of wolves or (b) Accept the sheep as a source of food for the wolves by paying for the depredation losses rather than reduce the wolves, thereby destroying plan objectives.

(3) What does vil(1)ification do to a wolf population?

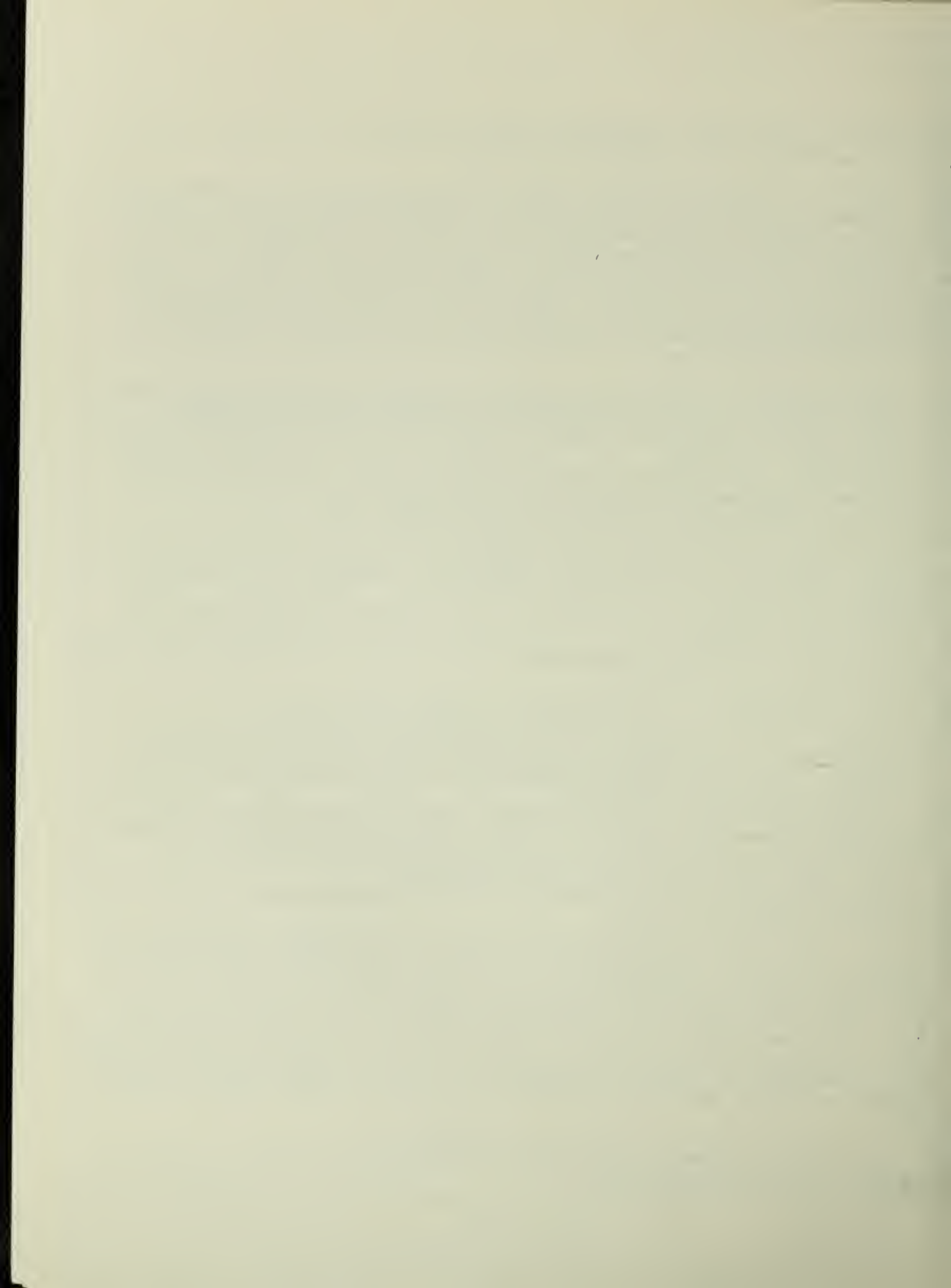
p.5, pr.3 -- Is there a real way to "document" livestock depredations, especially in the hinterlands where wolves exist?

p.5, pr.4 -- This one is particularly stimulating! It would appear that actions under the plan would take place after the fact, and after the biological adjustments had happened on their own. The proposal flies in the face of p.1, pr. 5, 1.4-5. No-where did we note how many deer it takes to support one wolf per 10 sq. miles. The deer number levels also presume deer are there only for wolves, not for man's use. Also, it presumes wolves eat nothing but deer! What do your weather records indicate about the number of severe winters in succession? Assuming there is good human and habitat management as proposed (elsewhere in the draft) as number one effort, won't the deer and wolves take care of themselves and ride the cycles of weather on their own?

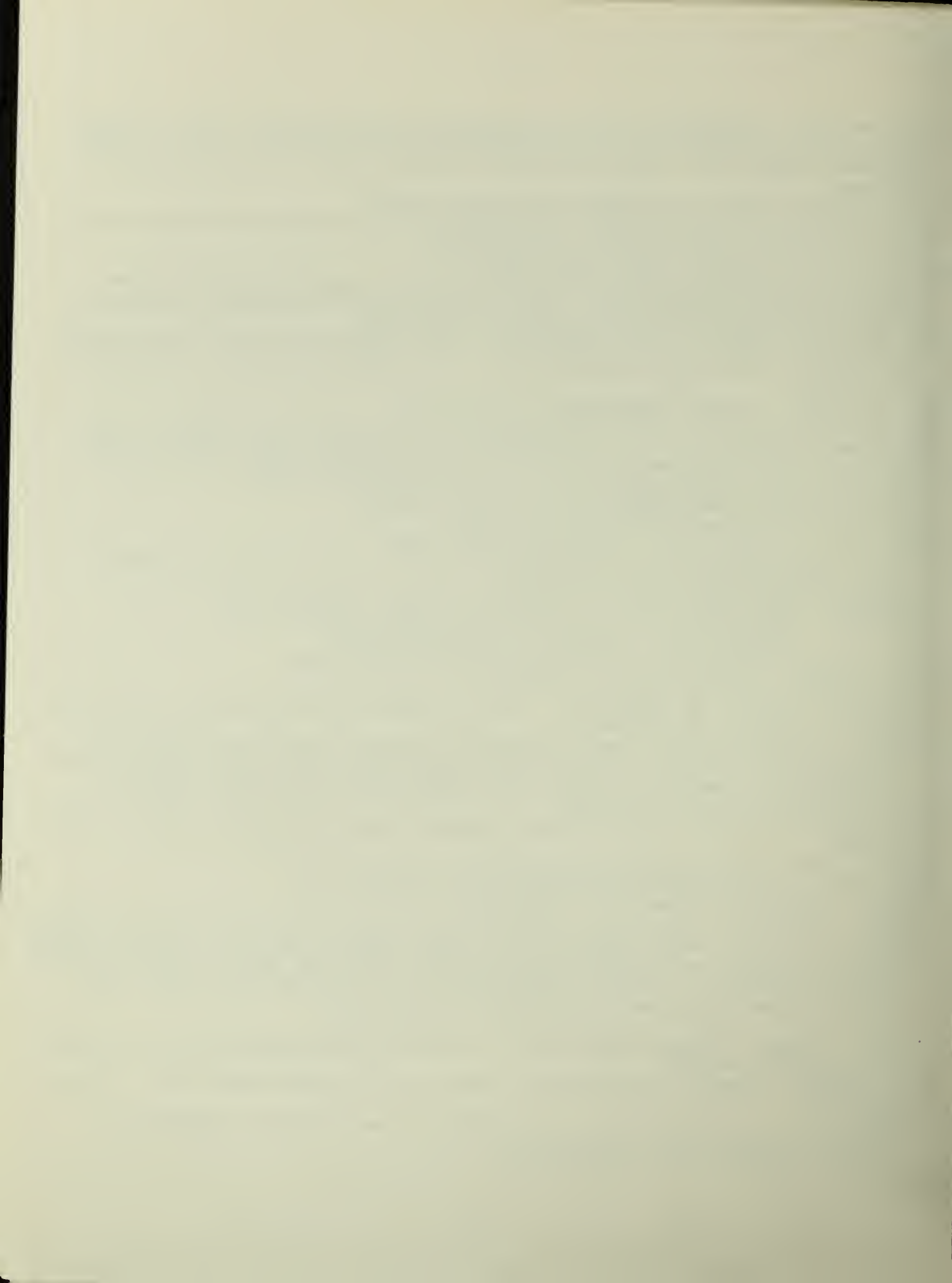
p.5, pr.5 -- "the team feels..."; What are your goals?

p.6, pr.2, lines 3+ -- How does this assumed interdependency of factors fit with the numerical facts reported on p.3?

p.6, pr.3 -- Why not set the classification by the wolf-range type you are dealing with?



- p.7, pr.1,(1) -- Is Minnesota the only existing range the plan should treat? And how is it possible to make extensive improvements in wildland habitat? Less fire control and more logging might increase prey species food and cover of the lower vegetation stories.
- (2) Previous attempts in Michigan and Wisconsin failed!
- p.7, pr.2, 1.7 -- insert after "to", "maintenance of", and eliminate the last sentence in the paragraph since it serves no useful purpose.
- p.7, pr.3, 1.4 -- delete "will", add "should".
- p.7, pr.4 -- Why not improve both the "human mental" and vegetative habitats before carrying out any reintroductions? These certainly should be completed in maximizing prime-range populations to test successes of plan ideas.
- p.7, pr.4, 1.4 -- What are "other quarters"? Is this opposition because of your intent to invade territory already invaded by man's uses which are known to be incompatible with wolves?
- p.7, last word -- change "investigation" to "efforts".
- p.8, pr.2, 1.3 -- who are they in this sentence? Man? Wolves? or "considerations?"
- p.8, Primary objective -- it is suggested that it be limited to known remaining high quality habitat in the lower 48, not to its feasible former range.
- p.8, 121-1 -- publishing technical data will not accomplish 1, 12, or 121. Why not translate data to common jargon that will sell the plan.
- 121-31 -- Will the conference be on the plan?
- p.9, 122-1 -- How expensive is achievement of this goal?
- 122-11 -- Why not bring facts like 8 deer per sq. mile into this outline instead of having everyone search each appendices?
- 122-112 -- Qualify "age classes" as necessary, proper, or appropriate.
- 122-112-2 -- Does controlled burning work in the northwoods?  
Should specific conifers be named here, too?
- \* -- If this event occurs, the wolf may have been over-managed.
- p.10, 122-114 -- add "for wolves in particular"
- 122-121 -- why just "non-commercial?" The way lumber prices are moving up, commercial ventures soon will be worthwhile.
- 122-31 -- If moose and deer cannot be handled, why add caribou to complicate things even more with unknowns. A caribou transplanting program in the Mt. Katahdin area of Maine about a decade ago failed! This thought seems highly inappropriate for consideration as part of the plan.
- p.10, 122-14 -- This step should be taken long before some of the other proposals already listed.
- 122-2 -- Why shouldn't wolf packs be natural?
- p.11, 122-31 -- The Endangered Species Act helps accomplish this.
- 122-4 -- substitute "planned" for "concerted."
- 122-5 -- Is not low harvest pretty well-balanced by more winter kill in the wolf ranges?
- 122-53 -- Can moose numbers reduce number of deer "needed" by wolves? Your measurements to this point have related only to deer densities. How many deer = a moose to a wolf? If you go "below" 80, is it not already too late? In wildland areas such as wolf range, can prey populations be estimated this accurately?
- 123-1 -- 10 deer is higher than in 122-11. What are the existing densities in primary and peripheral ranges?
- p.12, 123-43 -- There will be a time lag of a year or so in getting these facts. Is that too late?
- 123-431 -- Is the arbitrary take of 1 per 200 square miles logical, regardless of success achieved by plan implementation?





- 123-433 -- Unscramble this item. Confusing.  
123-44 -- Does this fit with 122-53 data?  
124 -- Why any taking? Specify the purposes.  
2 -- "Optimum-levels" could be zero, based on kill and compatibility with man.  
21 -- If so, do "2".  
214 -- "public health and safety".  
p.13, 221 -- "most inaccessible" to whom or what at what time?  
233 -- see 123-43.  
233-5 -- What about sex ratio of the "5"? From different packs?  
p.14, 235 -- Trauma probably begin at capture, not at release. Better clear this one up for the humaneness addicts.  
p.14, 3 -- Do Isle Royale wolves need management? Anything but complete (sans research collecting) protection?  
p.17+ -- We have expressed concern earlier re the allocation of funds, long-term, in peripheral efforts. Three years for this program is obviously only a beginning. The data gathering alone may take that long!  
p.17, line 6 -- No #s in FY77 & 78 indicate you expect success ? or failure? with caribou introductions?  
p.27, pr.1, 1.3 -- add at end "in the USA".  
p.27, pr.2, 1.4 -- is encouragement to be given without qualification? And are activities and programs all beneficial?  
p.27, pr.2, 1.6+ -- logging roads remove cover, too, but logging may provide habitat improvement, too.  
p.27, pr.3, 1.2 -- insert "development" after "each".  
p.27, pr.4, 1.4 -- The "cumulative effect" is a good point.

The End!

Don't worry about the nit-picking, but do consider fully the ramifications of some of the points raised.

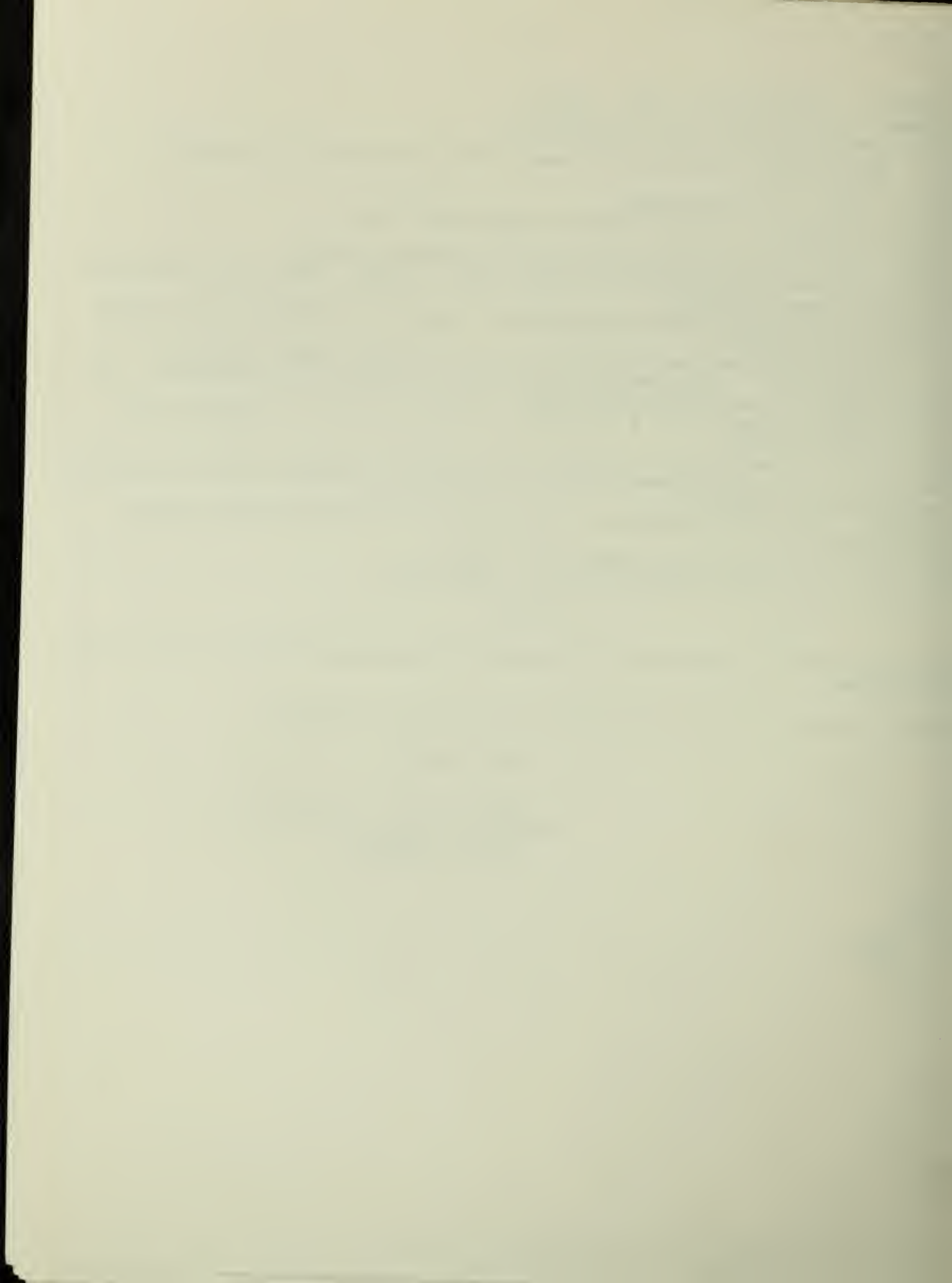
Thank you for the invitation and opportunity to review the plan draft.

Most sincerely,

  
Fred G. Evenden  
Executive Director

FGE/lam

cc: Council  
NRCA



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

Ottawa National Forest  
Ironwood, Michigan 49938

REPLY TO: 2630 Wildlife Habitat

March 8, 1976

SUBJECT: Eastern Timber Wolf, Recovery Plan



TO: Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Plan  
P.O. Box 190  
Marquette, Michigan 49855

This acknowledges receipt of the Recovery Plan for the Eastern Timber Wolf and lists our comments.

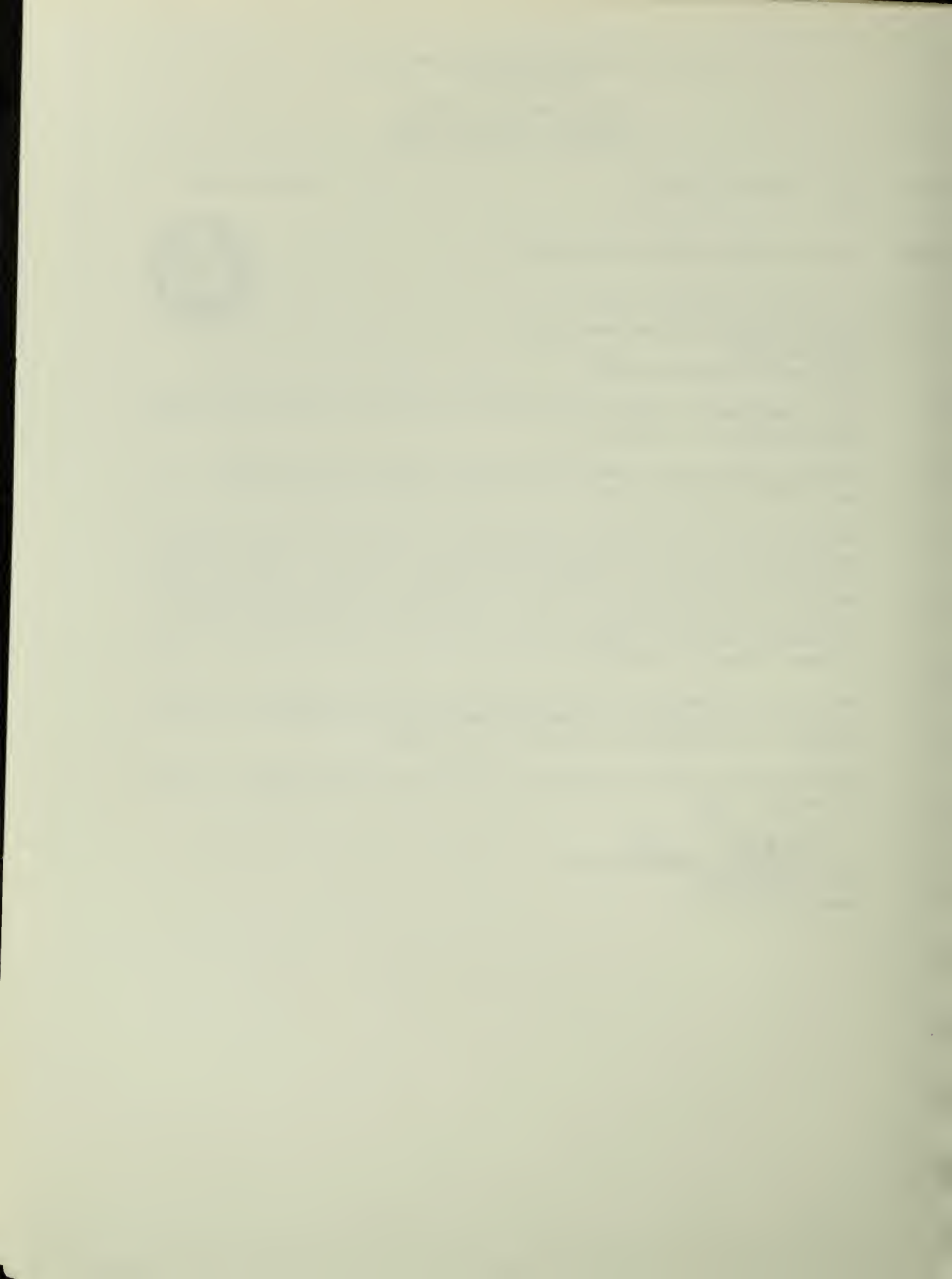
Recovery Plan Outline item 1 pertains to the wolf in Minnesota. We will defer comments on this item to local Forest Service units.

Recovery Plan Outline item 2, pages 12 to 14, refers to re-establishment of the wolf in the Upper Peninsula of Michigan, and elsewhere. The action proposed is described in a general nature, with the Forest Service to be assigned a role in development of future specific plans involving National Forests. Also, it is noted that public support activities are to be assigned high priority in future efforts leading to more definite planning.

We wish to cooperate in future programs with local people. We would also like to be present in future discussions to determine if it is prudent to re-establish the wolf in this area.

Recovery Plan Outline 3 pertains to the wolf in Isle Royale. We have no comment here.

M. K. LAURITSEN  
Forest Supervisor



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

Hiawatha National Forest  
Escanaba, Michigan 49829

2600  
March 9, 1976




Mr. Ralph Bailey  
Michigan Dept. of Natural Resources  
P. O. Box 190  
Marquette, Michigan 49855

Dear Ralph:

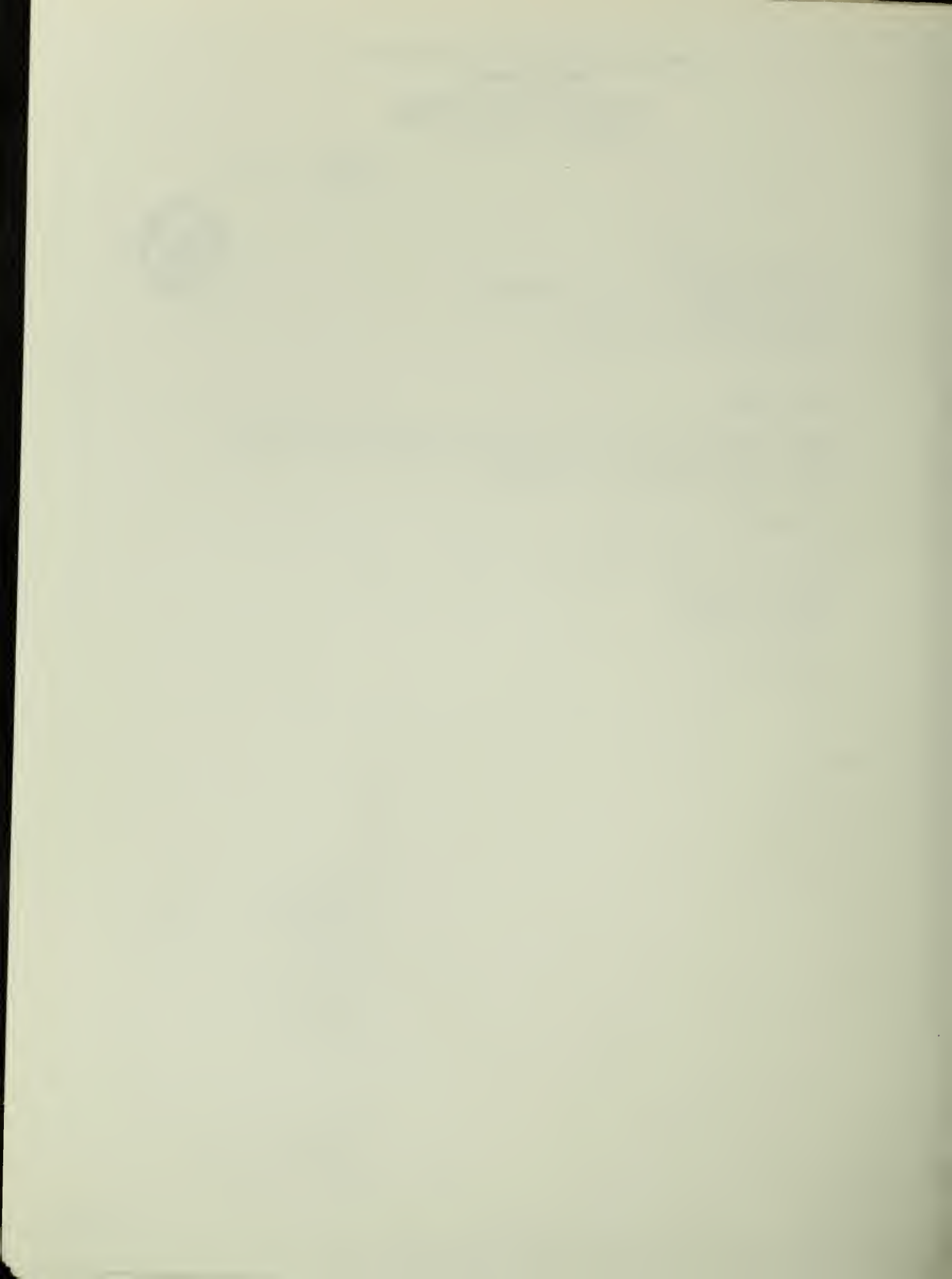
Thanks for the chance to look at the Wolf Recovery Plan. I asked Bill Taylor and Carl Dubovsky to review it from our end. Their comments are attached.

Sincerely,

  
JAMES A. MOHLER  
Timber Staffman

Enclosure

Reg. Mgr.		Reg. Mgr.
Asst. Reg. Mgr.		Asst. Reg. Mgr.
Asst. Mgr.		Asst. Mgr.
Bus. Exe.		Bus. Exe.
Asst. Bus. Exe.		Asst. Bus. Exe.
Engineer		Engineer
Const. Supt.		Const. Supt.
Fire		Fire
Fish		Fish
Fish-Const. Supt.		Fish-Const. Supt.
File:		File:





We are disappointed in the proposed plan for two reasons:

1. The discussion of wolf biology and Ecological requirements (critical habitat) is not sufficiently detailed to make a biological evaluation of potential wolf habitat, other than locate it in Minnesota.
2. The amount of attention the plan gives to the social aspects (political complications) of managing for wolves is much greater than should be expected from a team of biologists.

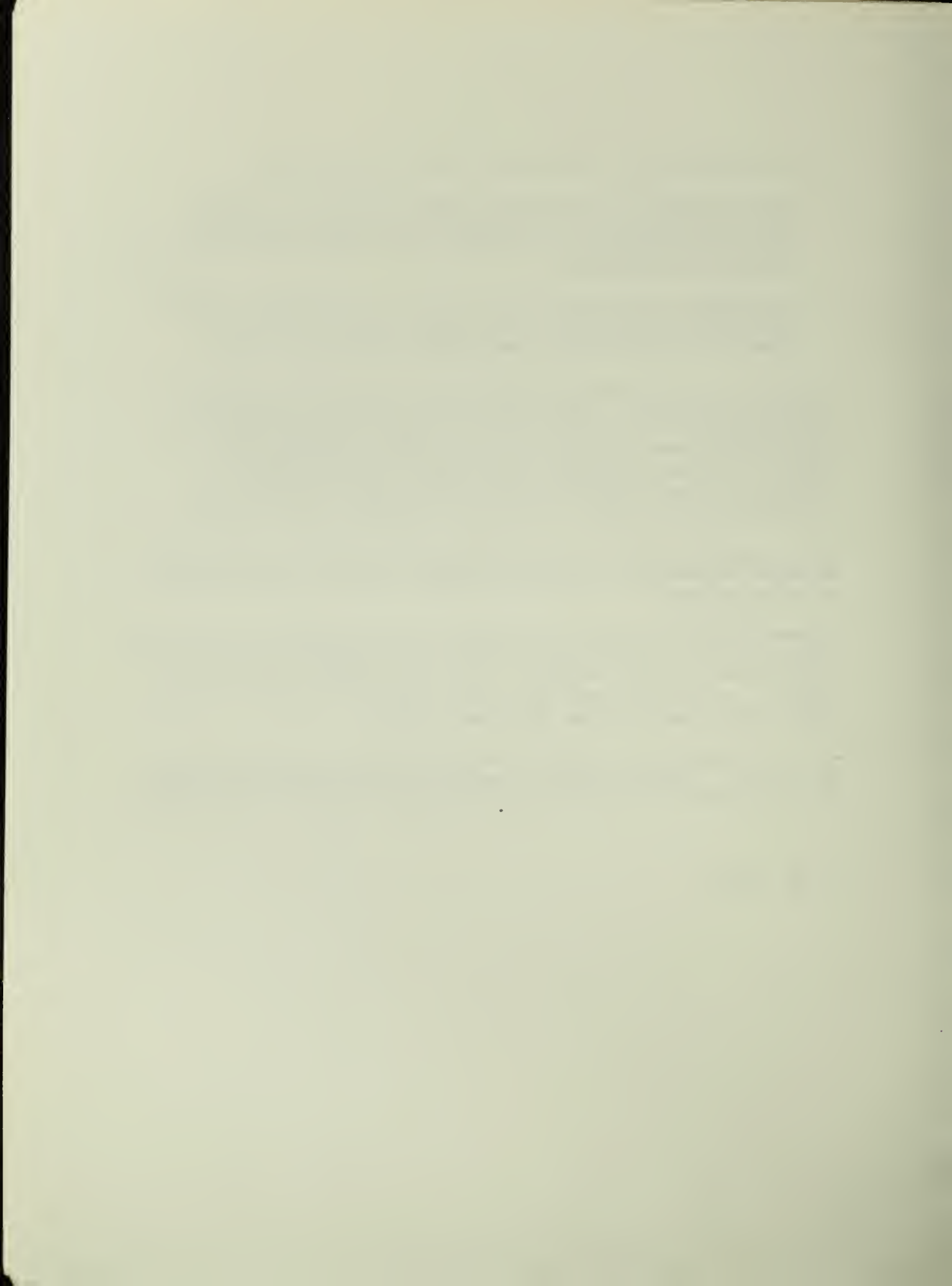
A plan which identifies what combinations of critical factors constitutes wolf habitat would provide land managers, land owners, and the general public with a tool or basis for evaluating wolf habitat management potential in areas other than Minnesota. It's possible such an evaluation would result in establishment of another breeding population of this subspecies; this would be a progressive step toward securing the Recovery Team objective.

Also, information about what constitutes wolf habitat would (will) be vital to the public education program which the team recognizes as very important.

Successful public relations programs; i.e., development of political support, result because of the active participation of professionals in the area of public relations, sales, advertising, and related fields. Any decision made along these lines by the team could preclude future contributions from these experts.

It was disappointing to read a minority report in a plan prepared by a team. Especially since it appears the minority report relates to the political rather than the biological aspects of the problem.

W. E. Taylor



Part III - PLAN OBJECTIVES & RATIONALE

- (223 - Obtain support of local people.
- (224 - Obtain approval of key state legislators.
  - Seems that this should appear somewhere else (administrative - educational - political). Give it to professional I & E people - closely coordinated with the biologists.

Minority report letter by LeRoy Rutske seems to show a lack of perspective of the problems involved in maintaining survival of a vanishing species. It appears that his objections are provided for in the plan proposals.

I agree with Taylor's comments.

Carl Dubovsky





# SIERRA CLUB

## North Star Chapter

March 8, 1976



Mr. Ralph E. Bailey, Leader  
Eastern Timberwolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey,

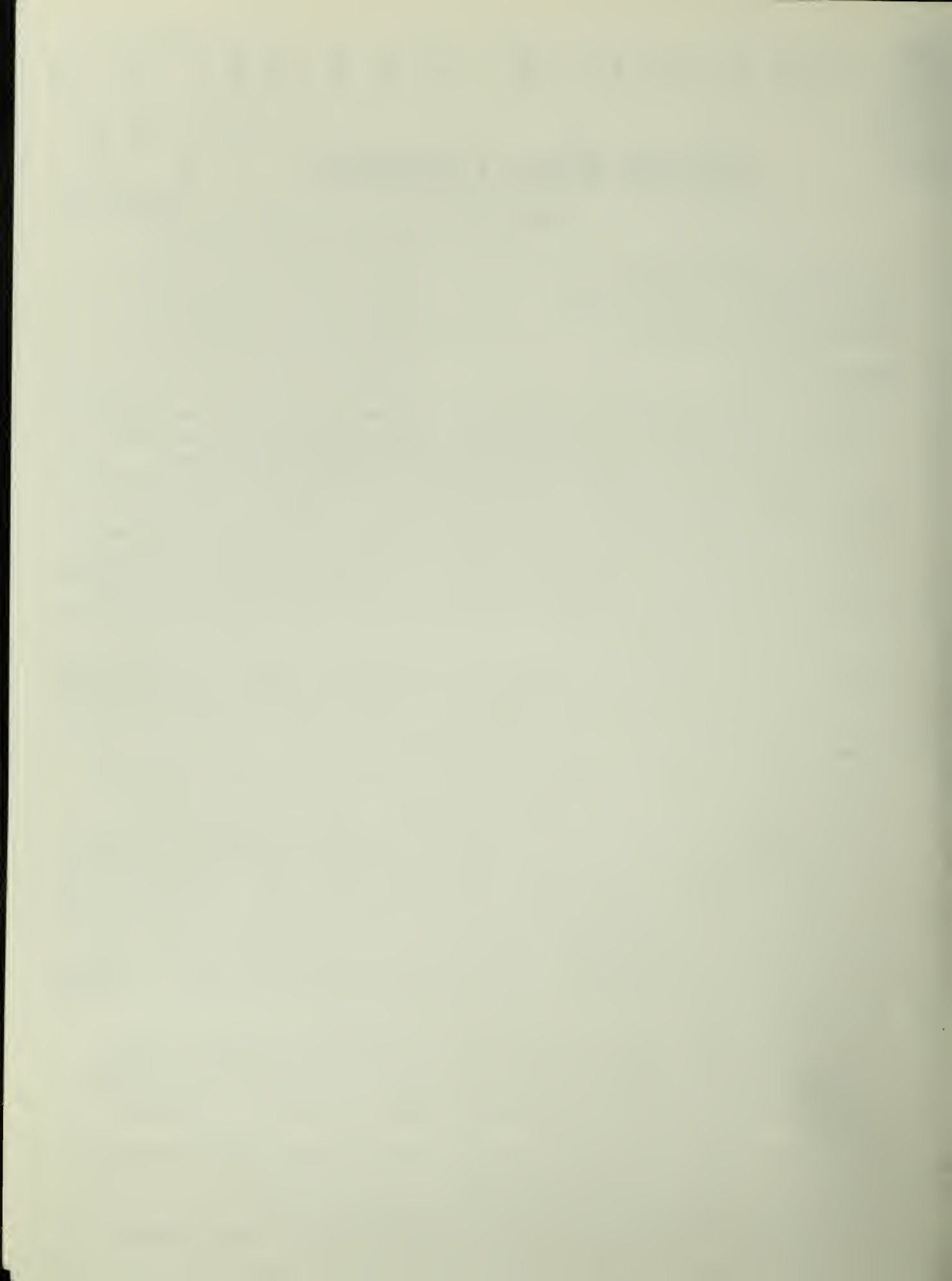
We appreciated receiving a copy of the draft Recovery Plan for the Eastern Timber Wolf. We consider it a positive step toward encouraging citizen input into the decision making process concerning management plans for the wolf.

Our main concern is for the preservation of the wolf and we agree with the general approach of the Recovery Team. We support the proposed actions of 1) establishing legal protection in sanctuary areas, 2) restoring wolf habitat to natural conditions through the use of fire ecology and introduction of caribou, 3) continued research and monitoring of wolf populations, 4) research into prey habitat requirements, 5) closing of the deer season and diversified forest ecology to optimize prey population, 6) discouragement of human development within the sanctuary zones, 7) reestablishment of wolf populations after careful consideration of biological and human factors.

Since we are interested in promoting non-consumptive use of our wildlife resources, and in discouraging consumptive use, we oppose the sport harvest of wolves and the decision to reclassify the wolf from Endangered to Threatened in Minnesota.

There are some relevant questions which we do not feel were answered by the Report:

- 1) What criteria were used to decide whether the wolf would be classified as Endangered versus Threatened in Minnesota and will this same criteria be used in other states?
- 2) How big is the problem of livestock depredation? What are the figures for livestock losses due to wolf predation, predation by other animals, other causes? Is livestock predation encouraged by negligent husbandry practices? At the Endangered Species Symposium in St. Paul on 4-5-75 Egar Olsen, Field Representative for the Farmers Union Marketing Assn stated that in the past 10 years in Northern Minn. there has been a 50% decline in the sheep population (making your map (p.42) showing Sheep Distribution in N. Minn. obsolete). It is our understanding that the sheep industry has been declining dramatically throughout the country since 1940 which would indicate that there are other than local factors operating. No mention has been made of taste aversion or repellants or financial compensation to ranchers for verified losses.
- 3) What are the specific criteria for establishing sanctuary zones within the current range of the wolf? What is the land use pattern within the peripheral and sanctuary areas? Why are Zones 1A and 1B separated by the peripheral zone?
- 4) How widespread is anti-wolf sentiment among the inhabitants of the peripheral range? Have opinion polls been conducted to assess the extent of the "people problem"?
- 5) Are there certain areas of this zone where local residents could tolerate the presence of wolves? Would trapping in these areas upset the stability of packs, encouraging conflict with human interests?
- 6) How "tight" will evaluation of the need for depredation control be? What are the criteria used to determine if a wolf should be taken for damage control?





7) How does the team predict the effect of its management plan on the population dynamics of wolf and prey populations? If such predictions are based on data collected in other ecosystems, how will the team assure that its working assumptions match ecological conditions within the Minnesota ecosystem? What factors would influence the Team to change the population goal of 1 wolf per 10 miles in Zones 1A or 1B?

8.) What is the nature of competition between hunter and wolf over prey resources? You may not be aware that when Dr. Douglas Pimlott was in Mpls in November 1974 he testified in U. S. District Court that in his opinion "it would be most desirable to have hunting excluded from wilderness or primitive areas" as it is in the Canadian Quetico Provincial Park. He testified further that "In terms of preserving the wolf population in Minnesota, I think it would be logical that one of the first things you would do would be to discontinue hunting because it would make more animals available to the wolves". We have suggested before that the BWCA which comprises 1/3 of the Superior National Forest be set aside as a sanctuary for all wildlife species. We feel that such a natural observatory is essential to provide base data for effective wildlife research. Such a sanctuary would be a 'living museum' in its truest sense.. The 1974 BWCA Management Plan certainly supports such a sanctuary when it states that the primary directive for wildlife and fish is to "manage biotic communities in all vegetative succession stages to allow native and established fish and wildlife to live and compete". There cannot be a natural competition or a natural ecosystem as long as man with his technological advantages is allowed to compete with the natural predators for the available game. The concept of "multiple use" should apply to wildlife management as well as forestry management.

Although the Team has done an excellent job in maintaining an ecological perspective on the biological problems of wolf management, it appears to us that the "people problem" has not been adequately covered. Before any reintroduction attempts are made, a workable program must be developed to ensure the tolerant coexistence of humans and wolves in areas where they come into contact with one another. These problems can be ameliorated only thru two-way communication. An educational program designed to justify the decisions of the government is unlikely to resolve the needs of citizens with either pro or anti wolf sentiments.

In conclusion, we believe that Nathaniel Reed's call for a moratorium on the taking of wolves should be effective until the Recovery Plan is implemented. Necessary control for the good of the species is a far cry from killing 100 wolves a year for sport and taking another 120 for predator control and 'unlawful taking' - especially considering the difficulty in estimating population numbers and the variable density.

We certainly support your proposed EIS to evaluate the impact on the wolf.

Sincerely,

*Harriet Lykken*  
Harriet Lykken, Chrmn  
Wildlife Task Force



March 6, 1976  
R.R. #2, Box 747  
Rapid River, MI. 49878

Ralph Bailey  
Leader  
Eastern Timber Wolf Recovery Team  
P.O. 190  
Marquette, MI. 49855

Dear Mr. Bailey:

At this time this letter cannot represent our organizations position for I did not have the lead time to present to the executive committee or board.

I am certainly most impressed and pleased with the existance of the Wolf Recovery Team and really appreciate the efforts of your team, the efforts, that is, that are directed toward maintaing and developing viable wolf populations.

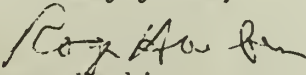
Wolf Management Actions

I agree that it is absolutely essential that sanctuary type areas be designated for the complete protection of the wolf. The Recovery Plan, and I recognize it is a draft, provides for taking of wolves killing domestic animals. I think it is necessary to explicitly evaluate the cost of developing barriers for wolf access to domestic animals or the cost of paying for or replacing domestic animals as compared to the actual and social cost of killing the alledged "criminal animal". Perhaps we should begin moving away from the value system which allows us to kill when someting is of high nuisance value - mind you, I am a hunter. I strongly support land use mangement practices compatible with the needs of wolf habitat. I think the Plan could be even more specific on habitat needs and that it could serve as a document providing explicit guidlines for actions and non-actions.

Comments on Plan Objectives and Rationale

I agree that a strong public information and education program is a high priority. By the same token consideration should be given to the need for contracting with professional public information and education entities for in-depth diagnosis and strategy development. Clearly, creative programs are needed. I do not think that the bureaucrats on the team are in a significantly better position than either the pro or anti wolf advocates to do an adequate assesment of the public information and educational needs. The team, according to the draft, sounds weary and afraid that even the most modest goals are unattainable. This is evident in the comment "that re-establishment of the wolf may not be prudent". I think it is the mandate of the team to be idealistic, state what could be, and later on look at restraints and constraints. Other examples of the timidity of the teams effort can be seen in the use of concepts such as "optimum level"-which includes notions of compatiblity with man, and "feasible" which is very subjective. If all recovery teams and plans are realistic, in the practical sense, then we will not be able to RECOVER our endangered species. They are endangered because of our social realities. We must change those realities.

Sincerely yours,

  
Roger Harbin





# National Wildlife Federation

N.W.F., WASHINGTON, D.C. 20036

Phone 202—797-680

March 5, 1976

Alph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Minnesota 55855

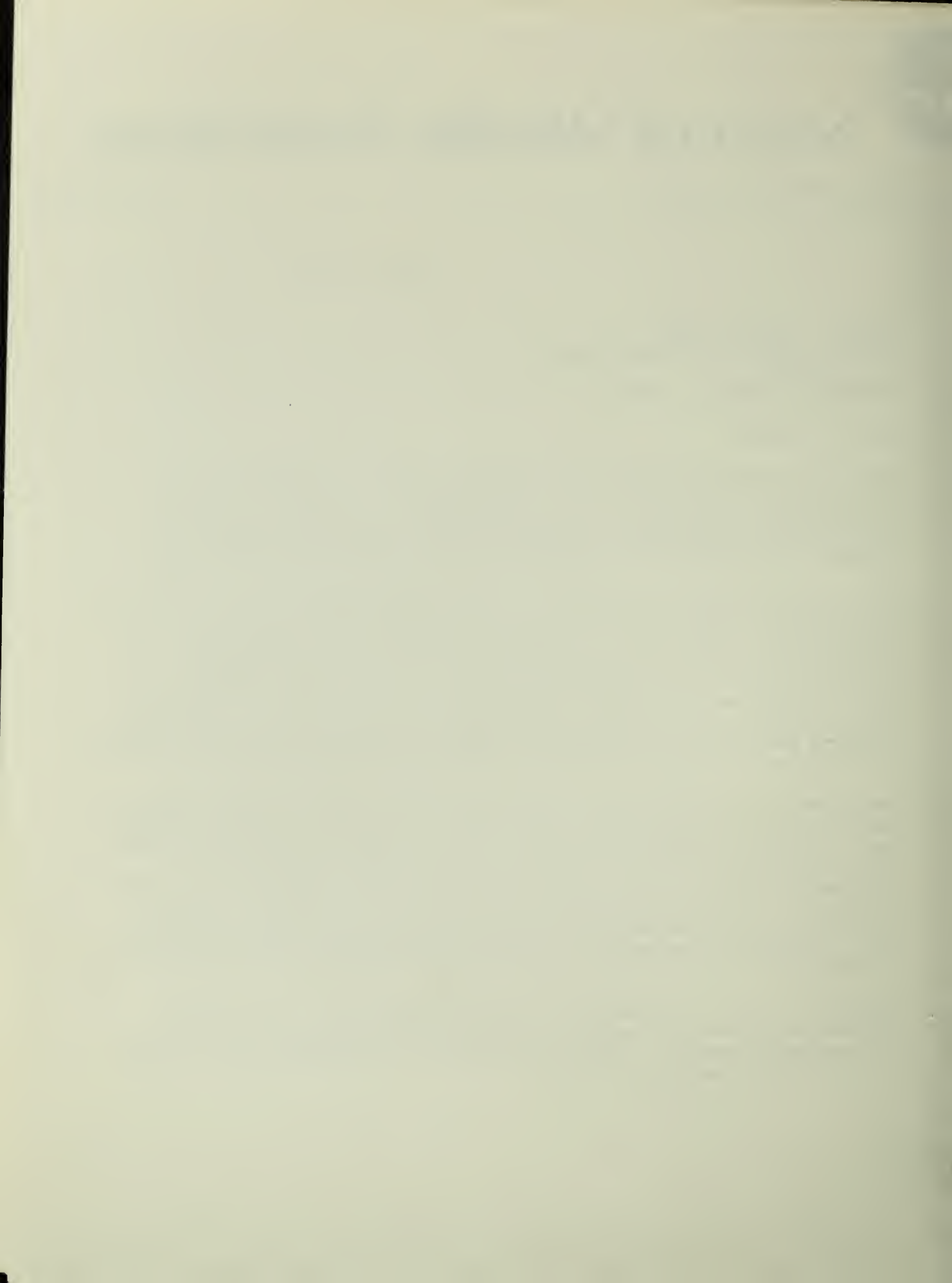
Dear Mr. Bailey,

As you know, the National Wildlife Federation makes a special effort to closely monitor the status of all wildlife resources, especially those classified as endangered. For this reason we are especially interested in the eastern timber wolf, and appreciate the opportunity to review and comment concerning the draft Recovery Plan for the Eastern Timber Wolf.

It is apparent that much time and effort has been expended in the preparation of the recovery plan, and you and the other team members are to be congratulated. Based on the information presented and the recommendations acknowledged scientists, the Federation supports the recommended classification of the eastern timber wolf to "threatened." However, we would suggest that you consider retaining the "endangered" classification for the northeastern population (Zone 1B) since you state (p. 5) "that the value of this Zone for allowing wolf numbers to fluctuate naturally outweighs the advantage of trying to maintain wolves there at maximum densities."

We concur with the team's feeling that allowing wolves to increase beyond the ability of prey to support them should not be permitted over an extensive area. Therefore we would recommend research to accurately determine wolf-prey ratios sufficient to maintain healthy populations of wolves at desirable densities as well as opportunity for sport hunting of prey species in excess. We further recommend close monitoring of wolf-prey ratios to detect possible imbalances before they become critical. We also believe that individual wolves preying upon livestock should be removed, regardless of whether such wolves reside within or without areas of primary range.

Finally, it is our firm opinion that the development of a strong public information program is requisite to public understanding and acceptance of management programs. Such programs should be implemented well in advance of any proposed management actions.





# National Wildlife Federation


Ralph E. Bailey

2

March 5, 1976

We appreciate the opportunity to review this draft recovery plan, and look forward to receiving all information relative to its future development and implementation.

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael E. Berger", with a stylized flourish at the end.

Michael E. Berger  
Conservation Liaison



# COLERAINE CIVIC CLUB

COLERAINE, MINNESOTA

55722

Kent L. Nyberg

PRESIDENT

March 1, 1976

Michael H. Barle

SECRETARY

Mr. Ralph E. Bailey  
F. W. S. Recovery Team Leader  
Federal Building, Fort Snelling  
St. Paul, Minnesota 55111

Dear Mr. Bailey,

We believe that the Eastern timberwolf is neither an endangered nor threatened species and therefore see no need for a proposed recovery draft plan as recently discussed in state newspapers.

Furthermore, we believe additional studies and expenditures are unnecessary for this species in Minnesota.

Sincerely,

*Michael H. Barle*

Michael H. Barle  
Secretary, Coleraine Civic Club





D H PIMLOTT

# The Wild Canid Survival and Research Center WOLF SANCTUARY

P.O. BOX 16204 - ST. LOUIS, MISSOURI 63105

March 3, 1976

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MRS. JAMES BOYD WARE  
St. Louis, Missouri

Dr. Ralph E. Bailey  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, MN 49855

Dear Dr. Bailey:

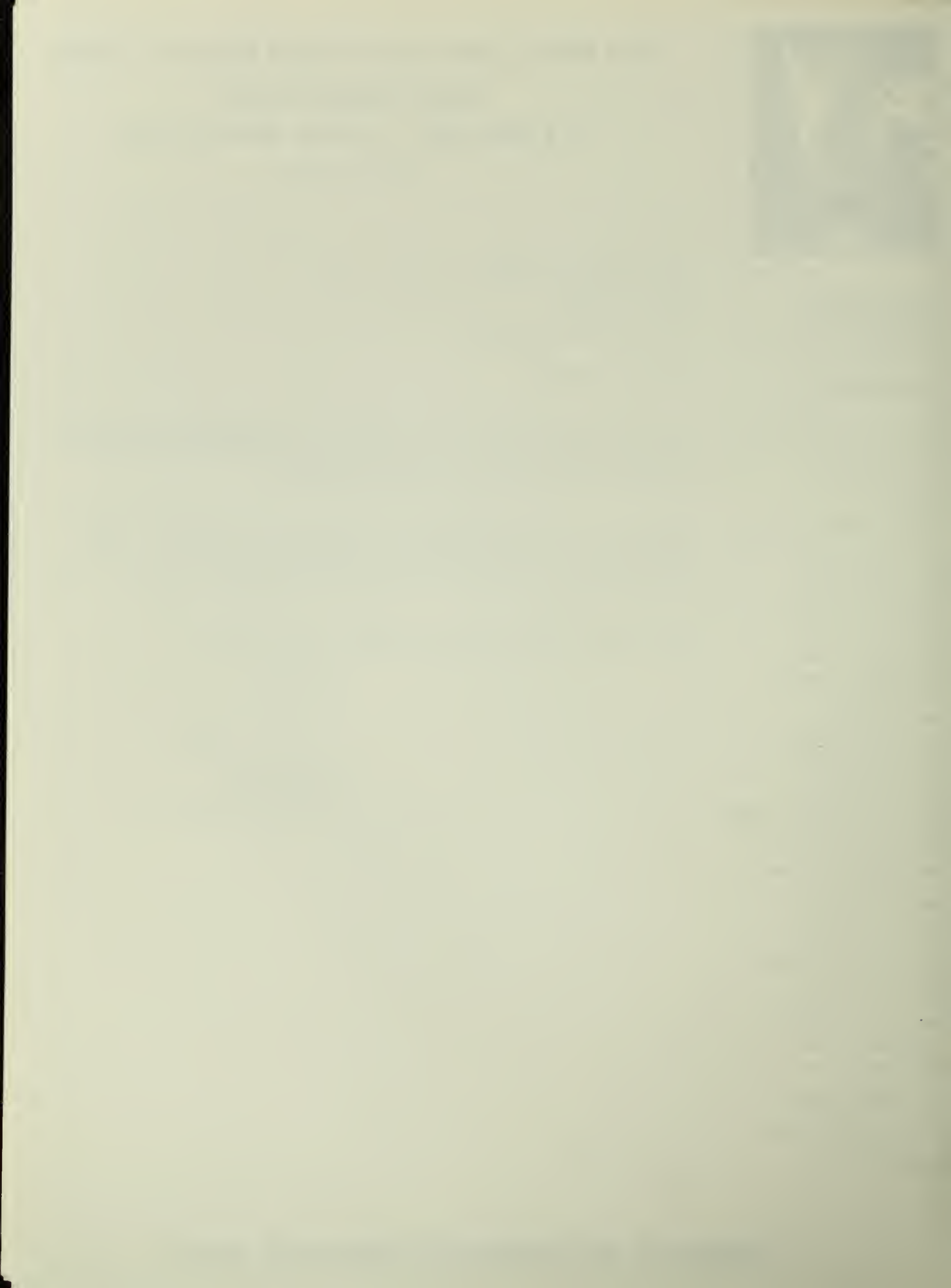
I recently received the first draft of the Recovery Plan for the Eastern Timber Wolf and appreciate having the opportunity to review and comment on the proposals.

Because of a scheduled trip to Europe, my comments will be submitted one or two days after the March deadline. I am assuming this short delay will not inconvenience you and make it impossible to consider the review I submit.

Thank you for your understanding of this delay.

Sincerely,

Donna Hart  
Executive Secretary





Norris Camp  
P. O. Box 114  
Roosevelt, Minnesota 56673  
March 3, 1976

Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

The following is in response to your request for a critical review of the draft of the Recovery Plan for the Eastern Timber Wolf. My comments and suggestions will apply mainly to the western half of Zone 1A and the area immediately west of it, for it is this part of the wolf's range with which I am most familiar.

I agree with the recommended re-classification of the eastern timber wolf from "endangered" to "threatened." The plan objectives and rationale are basically sound, and the long range approach is to be commended. Perhaps it could more aptly be termed a "survival plan" than a "recovery plan." Population goals are amply high and proposed harvests conservative. The estimate of 60 wolves being taken illegally in Zone 2 might be low. Of course wolves would be illegally killed in the proposed sanctuaries too. "Highly regulated management" of Minnesota's wolf population is an extremely ambitious endeavor. Management regulations could become meaningless without the concerted enforcement effort mentioned in the plan.

As regards Item 122-3, suitability of part of Zone 1A as wolf habitat is already threatened by Minnegasco's proposed peat gasification project in the "Big Bog" north of Waskish.

Establishment of a wolf sanctuary (Zone 1A) will be unpopular locally. It seems to be the contention of most people in this area that total protection is not required to maintain considerable numbers of wolves in the proposed sanctuary. The major concern of local residents, as elsewhere in wolf range, is for the deer herd; they fear that increased numbers of wolves resulting from total protection will mean fewer deer in the years to come. The habitat within the



Beltrami Island State Forest where I am working, would likely support a wolf density of near one wolf per 10 square miles and good deer hunting for several years, but extensive deer habitat improvement may eventually be necessary.

It may be argued that Zone 1A is unnecessary, especially if conservative harvest limits are set for Beltrami, Koochiching and Lake-of-the-Woods Counties. On the other hand, there is no reason why establishment of such a sanctuary would not be ecologically sound, at least on an experimental basis. If maintenance of a near saturation density of wolves in Zone 1A results in over-utilization of prey or an intolerable level of livestock predation in fringe areas, the sanctuary status should be quickly lifted, its boundaries adjusted, additional wolves harvested, or whatever. The non-contiguous Pine Island State Forest and Red Lake Wildlife Management Area might be considered as sanctuary zones if considerable shrinkage of Zone 1A becomes advisable.

Perhaps immediate consideration should be given to moving the northwest boundary of Zone 1A southward to avoid encompassing farms north of the Beltrami Island State Forest. The proposed boundary here is inconsistent with the western boundary. A minimum of six miles of forest exists between part of the proposed western boundary (Dick's Parkway Forest Road) and the scattered farms to the west, while the northern boundary, i.e., CSAH 2, encompasses some farmland. The northwest edge of the sanctuary could be made to correspond with the northern boundary of the Beltrami Forest, another east-west forest road further south, or the Roseau and Lake-of-the-Woods county line. I fully expect some wolves to be killed in this north part of the Beltrami Forest regardless of legal status. Further, the concept of a western sanctuary would be more acceptable locally if the remaining northern boundary run somewhere south of Highway 11 to avoid including farms where livestock is produced. In the description of Zone 1A on page 28, line 14 of the first paragraph, "R25W" should read "R35W".

I notice that the southwest corner of Zone 1A includes part of the Red Lake Indian Reservation and that about half of the Nett Lake Reservation is included on the extreme east end of the zone. Can Federal or State authorities regulate the taking of wolves by Indians on their own lands? The entire western half of Zone 1A contains scattered lands belonging to the Red Lake Band of Chippewa Indians.

Appendix A does not show the Northwest Angle. The Angle is known to support wolves, while not producing any livestock so far as I know. It is mostly Indian land, but you will



March 3, 1976

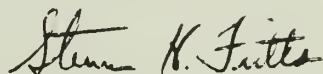
probably want to classify the remaining land there into a zone (Zone 2?).

A further complication with Zone 1A is that all fauna in essentially its western half might become the property of the Red Lake Band of Chippewa Indians. The band has begun a legal battle to regain hunting and fishing rights to its original reservation in this area. I assume tribal hunting and fishing rights would supersede Federal control over the wolves. For an illustration showing the size of area involved see page 73 of Minnesota Lands.<sup>1</sup>

Most livestock loss attributed to "wolves" around my study area is actually the work of coyotes. Genuine cases of timber wolf predation on livestock are difficult to document. I believe they are surprisingly rare considering the proximity of wolves to cattle and sheep in the area. Nonetheless, livestock predation does happen and can represent financial hardship for the individual farmer. Increased dispersal of surplus wolves into surrounding farmland could increase livestock losses. The wolf population here has apparently been increasing for the past two years and is probably within a year or so of leveling off. Last year's livestock losses may have been higher than those of previous years, so it stands to reason that some further increase might be expected. Therefore, it is imperative that a well organized control program be in effect to aid the farmer as soon as possible after losses are reported. I would even propose that farmers should have the right to protect their domestic animals from wolves. Would it be acceptable to allow farmers to shoot or trap wolves on their private property where livestock is kept? Most livestock producers would likely destroy the depredating wolves anyway, if possible. Any resultant reduction in Minnesota's wolf population would be insignificant. Perhaps the farmer should be required to offer proof of damage. At any rate, I think this idea deserves consideration if the specifics can be worked out.

If you need more information, or if I can be of further assistance, please let me know.

Sincerely,



Steven H. Fritts

CHF/dn

<sup>1</sup>Dana et al. 1960. Minnesota Lands. Livingston Publishing Co., Norberth, Penn. 468 pp.





# STATE OF ALASKA

## DEPARTMENT OF FISH & GAME

Jay S. Hammond, Governor

March 1, 1976

Mr. Ralph E. Bailey, Team Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Thank you for the opportunity to review the first draft of the Recovery Plan for the Eastern Timber Wolf. The plan did not reach me until the third week of February, hence the delay in returning my comments to you.

In general the Plan Outline (P. 8-14) reflects well on the substantial effort invested by the Team during its several months of deliberations. I will address several specifics contained in the Plan after commenting on the narrative accompanying it.

My reaction to the background information and the plan's objectives is not generally favorable. The reasons for this reaction are outlined below.

My concept of a recovery plan for an endangered species centers around a detailed sort of management scheme whereby the species' future can be guaranteed, i.e. the species can be delisted as endangered. Since the eastern timber wolf is not in imminent danger of extinction, the objectives of a recovery plan for it can be somewhat more flexible; this is reflected in the current draft of the plan. Nevertheless, I feel the primary objective for this subspecies should be to preserve at least one naturally functioning wolf population that can serve to preserve the eastern timber wolf as a member of the fauna of the the United States. The primary objective of the draft plan as stated on page 8 seems to me to encompass goals that are far too broad, that are based on political rather than ecological criteria, and that may well be beyond the scope of available funds. Although much attention in the plan is given to re-establishing wolf populations in parts of the eastern U. S., nowhere is there an adequate, ecologically based discussion of the reasons for such an approach. Thus, a wolf biologist reviewing the plan must wonder if one-half of the action plan can be justified in light of the highly regulated management scheme that is proposed for the existing wolf population in Minnesota.

A recent article in January 1976 Audubon on the Yellowstone Grizzly controversy contains some truths that I believe apply to the future of wolf management in the lower 48. Author Bil Gilbert wrote:



"The grizzly is a magnificent, impressive animal. Also it has become a symbolic one, a reminder of what our West and we ourselves once were-but are no longer. The general feeling seems to be that it is desirable to keep a few grizzlies in the lower 48 states for symbolic and esthetic reasons, but that the tolerable number of grizzlies is very small. This is an observable truth. (In all of this debate it should be honestly admitted that the genetic, ecological, natural future of the species lies in Canada and Alaska.)"

In its zeal to "re-establish viable populations of the Eastern Timber Wolf in as much of its former range as is feasible", and to maximize wolf numbers in 11,418 square miles of Minnesota I wonder if the Recovery Team could benefit from Gilbert's wisdom and reappraise its approach to wolf transplants.

With regard to other proposed actions written into the plan, I find the justifications for these also inadequate. For example, on page 7 several future circumstances that could affect available wolf habitat in Minnesota are used to explain why restrictions now need to be placed on the taking of wolves. However, a flexible plan that could react to these contingencies if they occur would be the proper way to plan for them. This does not deny that "prudence dictates a conservative approach" nor does it imply that regulated taking is not necessary now.

Also poorly justified is the need for a wolf sanctuary in the entire primary wolf range in Minnesota. The committee that drafted the 1972 Minnesota wolf Management Plan proposed a 2350 square mile sanctuary but agreed that its establishment was not necessary for the continued presence of the wolf in the state. The recovery team is now proposing an 11,418 square mile sanctuary for a subspecies that they acknowledge should be classified as threatened, but nowhere in the plan is there a good rationale for the establishment of such a sanctuary. Again, this does not imply that sound reasons are lacking for the proposal, I am merely suggesting that if they exist they should be inserted in the plan to enhance its acceptance.

The Recovery Plan contains one more set of proposals that I feel need additional justification. These relate to the intensive management scheme proposed for the primary wolf range in Minnesota. This highly artificial system of habitat and prey population manipulation is geared to maximize wolf numbers, hopefully to achieve a density of one wolf per 10 square miles. I have several reservations as to the wisdom of this approach: (1) its scope seems unnecessary to insure the perpetuation of the wolf in Minnesota, (2) I question the financial commitment necessary to achieve it, (3) it assumes that the land management agencies concerned must adopt a wolf-centered approach in their decision making to the exclusion of other resource values, (4) it detracts from certain values that a naturally functioning wolf population produced by a less artificial



approach to wolf management would promote, and (5) the proposed ecological manipulations may not produce the desired, short-term results in the neat, orderly, oversimplified manner implied in the plan. I feel that serious consideration ought to be given to allowing the wolf population to seek its own level with a minimum of management in either zone 1A, zone 1B (p. 30), or both if the Team's recommendations concerning the size and location of sanctuary areas are adopted. In short, the proposed plan of management for wolves in the primary range of Minnesota seems to go well beyond those reasonable measures necessary to insure sound ecological management for a threatened subspecies.

The following comments relate to specific practices contained in the plan; each comment is preceded by the plan designation to which it refers.

- 1) 122-112-1, 2, 3; 122-122: An estimate of the acreage requiring these treatments would help place 122-1 in perspective.
- 2) 122-13: The woodland caribou transplant would obviously not be needed if deer, moose and beaver populations could be managed intensively as suggested in other sections of 122.
- 3) 122-31: This is a noble goal but I wonder if in zone 1A it's beyond the scope of the agencies concerned.
- 4) 122-4: In light of the enforcement problems on the SNF from 1970-74, more specifics are needed here as to how to accomplish effective law enforcement.
- 5) 122-52: Can prey populations be accurately monitored over large areas?
- 6) 123-43; The recovery team is to be congratulated for recognizing that sport hunting and trapping of wolves is the only practical way to reduce the wolf population in the peripheral range. It would be unfortunate if this provision was deleted from the final plan in favor of some sort of taking by government trappers.
- 7) 223;224: These seem to be the essence of insuring a successful transplant yet very little detail in the plan explains how to accomplish them.

One final comment regarding the literature cited in the draft plan. Van Ballenberghe, et al. 1975 is cited on page 2 but it does not appear on page 47. Also, several of the citations (e.g. Mech 1971, Mech 1975) seem to have very little bearing on wolf management while some papers that would seem to be of importance (e.g. Stenlund 1955, VanBallenberghe 1974) are not cited.

Again, thank you for the opportunity to review the draft plan. Please provide me with a copy of the plan when it is finalized.

Sincerely,

*V. Van Ballenberghe*

V. VanBallenberghe  
Game Biologist

State of Alaska  
Department of Fish and Game  
333 Raspberry Road  
Anchorage, Alaska 99502





Route 2, Box 110  
Escanaba, Michigan 49829  
March 11, 1976

Ralph Bailey, Chairman  
Wolf Recovery Team  
Department of Natural Resources  
Marquette, Michigan 49855

Dear Ralph,

We appreciate the opportunity to review the recovery plan for the Eastern Timber Wolf, but must express disappointment that the emphasis is on the social and political problems (important as they are) rather than the biological factors necessary for the recovery and placement of wolves in other areas.

It seems from the plan that the objective is to justify changing the status of the wolf in Minnesota from endangered to threatened. We would expect a wolf 'recovery plan' to deal with the critical habitat: what does a wolf need to live - and, equally important, where else might one find the required habitat?

Establishing a breeding population of this subspecies somewhere in addition to Minnesota should be a primary objective - indeed, THE objective - as experience has shown that a breeding population in a single area is in an end-of-the-line position.

requirements

If the critical habitats are identified, the team and others who will be involved, landmanagers, land owners and the public, would be better able to assess the introduction of the animal into other areas. Consideration of the problems encountered in introducing them surely cannot be ignored, but a good information program - and there are professional I&E people who can do it effectively - could help make the transplant more successful. Restriction of hunting and/or trapping in the release area - with good educational information about why - might be considered. How about indemnifying stockmen for animals proved to be lost to wolves - or providing stockmen with fences - or have them fence their own stock.

Since this is a team effort, it was a surprise to read a minority report, particularly when that report refers to a political rather than a biological aspect.

With sincere interest in, and hope for the future of the wolf,

*Bill & Charlotte Taylor*

Bill and Charlotte Taylor





STATE OF  
**MINNESOTA**  
**DEPARTMENT OF NATURAL**

CENTENNIAL OFFICE BUILDING • ST. PAUL,

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Asst. Reg. Mgr.	Forestry
Bus. Exec.	Game
Asst. Bus. Exec.	Information
Engineer	Lands
Const. Supt.	Law
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Fish Const. Supt.	
Files	

March 1, 1976

Mr. Ralph Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Our compliments to the Eastern Timber Wolf Recovery Team for a thorough and well done job in completing a most difficult assignment. It is obvious that many hours of hard work went into the plan.

In general, the Minnesota Department of Natural Resources agrees with the plan. I am especially pleased with the emphasis given to habitat management. Obviously the future of the wolf depends primarily upon the deer herd and the deer herd depends upon good forest management practices.

Following are changes that the Minnesota DNR recommends in the plan.

1. Complete declassification of the wolf in Minnesota.
2. Deletion of the northwestern sanctuary.
3. Clarification of chronology regarding habitat management programs, timber wolf control and recommendations to close the deer season.

1. Complete declassification of the timber wolf in Minnesota is recommended. Most biologists agree that the wolf population is not in danger (threatened) in Minnesota. As the plan points out, "wolves have survived for so long in Minnesota despite bounties and year-around hunting and trapping, there may be a question as to why any restrictions need now be placed on the taking of the wolf." It further states "However, future circumstances are unpredictable and those that now exist could change drastically" and goes on to cite "widespread industrialization, mineral exploitation and general development".

Although the future is uncertain, the trend in northeastern Minnesota is toward more environmental protection, not less. The very fact that much of the land is in public ownership and under agency protection rules out any significant changes in land use without drastic changes in policy and/or law. If these changes were forthcoming the eastern timber wolf could then be returned to the appropriate list.

Retention on the list because "prudence dictates a conservative approach" is not a valid reason. The credibility of the entire endangered species program will suffer if decisions are made on anything other than biological facts.



The problem of funding to implement the Endangered Species Act must also be considered. Minnesota would, of course, welcome a large habitat program but not at the detriment of the many species that are truly endangered or threatened and urgently in need of funding. Considering the charisma of the wolf nationwide and the general misunderstanding the public has regarding its status, it might be difficult to relegate programs for wolf management to second place.

2. The request for deletion of the sanctuary is based on the fact that most of the area adjacent to the sanctuary (including nearby lands in Canada) is a livestock growing area. Raising the present wolf population of 1 per 30 square miles (Mech, page 35) to 1 per 10 square miles as recommended in the plan would greatly intensify depredation on livestock and other domestic animals as well as depress the now stable deer population. Public support will be the key element to a successful wolf management program. The adverse public reaction that would ensue because of the northwest sanctuary and substantially increased depredation problems would hurt the overall cause of the timber wolf in Minnesota.

Let us not forget that the timber wolf is a large and effective carnivore with a high reproductive capability. If the livelihood of our northern residents as well as the deer hunting opportunity of many citizens is jeopardized, the attitude of the majority, now cautiously supportive or at least non-committal, could be pushed into the anti-wolf ranks and 25 years of progress would be lost.

From the management standpoint it is highly questionable that sanctuaries are needed to manage wolves. They were not necessary to the wolf's survival in the past and, with strictly controlled taking, should not be in the future. The concept of refuges is, of course, an old one and is still popular with the public and would be of considerable comfort to many people who fear for the welfare of the wolf. However, the northeastern sanctuary should be adequate in size and location and would not cause the "backlash" against the wolf that the northwestern sanctuary would.

Regarding the northeastern sanctuary consideration should be given to making it inviolate with no taking of wolves allowed. To accomplish this, boundaries should be aligned so that wolf depredation will be insignificant within the sanctuary. If any taking is allowed in the sanctuary, confusion and suspicion could result particularly amongst the concerned public from other states where our control program would be misunderstood.

3. If possible the recovery plan should spell out the chronological order of the habitat development program, the wolf control program and the need to close the deer season. The plan has caused considerable concern in Minnesota because of misinformation released by the press that the major thrust of the plan is to "close the deer season to feed wolves". Obviously a massive habitat program is a prerequisite to the other actions. It also follows that a wolf reduction program may be necessary in areas where they are extirminating their supply of deer. Only if a habitat program and a

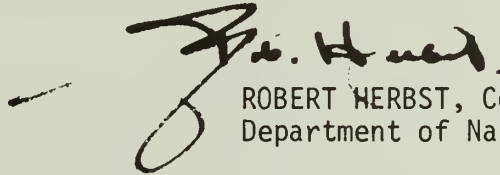




timber wolf reduction program, for some unforeseen reason, should fail, could the closure of the deer season be considered. Closure of the deer season can only be considered on the basis of the deer population itself and is, of course, a state decision.

The opportunity to present the Minnesota Department of Natural Resources' views on the recovery plan is very much appreciated.

Yours truly,

A handwritten signature in dark ink, appearing to read "R. Herbst", with a large, stylized loop at the end.

ROBERT HERBST, Commissioner  
Department of Natural Resources

RLH:rmh



U.P.E.C.  
Box 34  
Houghton, Michigan 49931

Mr. Robert Linn  
Department of Biological Science  
Michigan Technological University  
Houghton, Michigan 49931

March 5, 1976

Dear Mr. Linn,

On behalf of the Upper Peninsula Environmental Coalition, we offer the following appraisals and criticisms of your Recovery Plan for the Eastern Timber Wolf.

The planned management program of the wolf in Minnesota seems comprehensive and complete. This plan, as proposed, appears to insure the continuation of a viable wolf population. However, we are concerned with the lack of coverage of Michigan and Wisconsin as re-establishment areas. Both state populations are mentioned on page 12, part 2, for re-establishment at optimum levels, but the rest of the plan is rather vague about these areas and we feel that as much emphasis should be placed here as on the proposed introduction sites in the eastern states.

We agree with your overall outline on re-establishment, but further feedback will be needed concerning section II, Group A, part 7 and Group B, parts 3-7. These sections, which deal with public opinion, are the most complex and we assume appropriate emphasis will be placed on them. As a private conservation group, we will supply assistance in these areas.

As a final suggestion, we feel that universities can supply capable and enthusiastic personnel for research purposes.

Sincerely,

*Paul Tebbel*  
Paul Tebbel

*David R. Bell*  
David R. Bell

*Mary K. O'Herron*  
Mary K. O'Herron

*Kris A. Warner*  
Kris A. Warner



Jane P. Colin  
Bell Museum of Natural History  
University of Minnesota  
Minneapolis, Minn. 55455

March 7, 1976

Mr. Ralph Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey,

The decision of the Recovery Team to set aside and restore sanctuary areas as a "natural functioning" museum, is of incalculable scientific and educational value.

It appears from the Recovery Team Report, that management of the timber wolf may be more of a "people problem" than a "biological problem". The implementation of any management plan or reintroduction plan is dependent on the cooperation of local citizens.

It would be highly desirable for the Recovery Team to show leadership in establishing channels of communication among groups of concerned citizens. As the situation now stands, criticisms on philosophical issues are addressed to the Recovery Team by concerned citizens, when it might be more appropriate for citizens to address each other directly. When the Recovery Team is subjected to public pressure, there is a tendency for its credibility to decline.

I would like to recommend two procedures for inclusion in the Recovery Plan Outline. The first (Mediation Board) is designed to provide a public forum for complaints regarding wolf disturbance of humans, and human disturbance of wolves. The second procedure (Working Model of Wolf Population Dynamics) is designed to make explicit the manner in which human activities may be predicted to affect the wolf and prey populations.

suggested additions:

- 125 Environmental mediation procedures will be conducted regarding problems of wolf management.
  - 125-1 A neutral mediator will be hired with the following duties:
    - 125-11 Identify citizen groups concerned over wolf management
    - 125-12 Form a Mediation Board from respected persons recommended by the citizen groups
    - 125-13 Meet with the Mediation Board to discuss grievances, define the problems, and seek mutually satisfactory solutions
    - 125-14 Facilitate communication between the Mediation Board and the Recovery Team





- 125-2 Regarding management plans for the wolf, the Recovery Team will consider and answer to the recommendations of the Mediation Board
  - 125-21 The Mediation Board will be responsible for collecting and reviewing information on public attitudes, land-use practices, and livestock predation
  - 125-22 The Recovery Team will be responsible for providing the Mediation Board with yearly assessments of wolf and prey population densities; estimates of hunter and wolf kill of major prey species; and a prediction of the population trends of wolf and prey populations over the subsequent five years, under the current management plan
- 125-3 The Mediation Board will be responsible for creating and administering a Reimbursement Fund for depredation losses

- 
- 114 As a tool for evaluating the impact of human activities on the wolf population, develop a simulation model of the functional/numerical relationships among wolf populations, prey populations, and competing predators
    - 114-1 Evaluate existing models of wolf population dynamics. Make changes in these models to match ecological conditions in Minnesota, or develop a new model.
    - 114-2 Offer the model for criticism to the academic community, and incorporate suggestions. Treat the model as a working hypothesis, periodically revising it as more information is accumulated.
    - 114-3 Use the model to make explicit long term predictions of the effects of proposed management plans, the impact of proposed development (EIS), or population dynamics in areas proposed for reintroduction programs.
- 

The establishment of a Mediation Board is recommended for the following reasons: 1) a channel of communication must be opened among concerned residents of the wolf range, hunter/trappers, and citizens concerned about the preservation of the wolf and its habitat 2) the Recovery Team would be relieved of public pressure, and would only have to answer to one citizen body rather than several, 3) the Team would receive better information regarding the "people problem", and citizens would receive more direct information regarding the "biological problem" and predation.

The development of a Working Model of Wolf Population Dynamics is

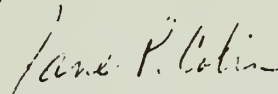


(3)

recommended for the following reasons: 1) the implicit assumptions used in long range planning would be made explicit, and subjected to academic review and improvement, 2) credibility in the validity of Team decisions would be improved if laymen could look at long range predictions of wolf/prey population dynamics, 3) the model would provide a valuable tool in assessment of the impact of developments within the primary range of the wolf, and feasibility of reintroduction programs.

It is a difficult task to develop management plans when there is public clamor for both consumptive and non-consumptive uses of wildlife resources. Hopefully the two suggested additions to the wolf Recovery Plan would aid in public acceptance of the compromise outlined by the Recovery Team.

Sincerely,

A handwritten signature in cursive script, reading "Jane P. Colin".

Jane P. Colin





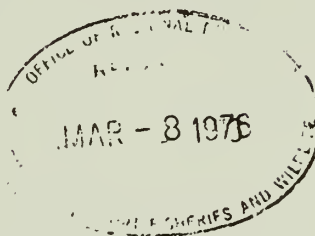
Ogden Reid,  
Commissioner

**New York State Department of Environmental Conservation**

50 Wolf Road, Albany, New York 12233

March 3, 1976

Mr. Jack E. Hemphill  
Regional Director  
U. S. Department of the Interior  
Fish and Wildlife Service  
Federal Building-Fort Snelling  
Twin Cities, Minnesota 55111



Dear Jack:

I know my response to your December 19 letter conveying the recovery plan for the timber wolf is late, but still want to record our comment for your benefit. This plan is a most practical and vital document. Its depth can best be understood by individuals with a thorough understanding of deer-moose-beaver carrying capacity and population dynamics, and the role of forest succession to these species. It is also essential to have a deep background knowledge of the interrelationships between these prey species and a large predator such as the timber wolf.

A first reading of this recovery plan might permit one to label it somewhat superficial. However, critical appraisal of the plan impresses one with its completeness without detail.

My staff considers the Recovery Plan for the Eastern Timber Wolf an excellent professional document.

Sincerely yours,

Herbert E. Doig  
Director  
Division of Fish and Wildlife







UNITED STATES  
DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT  
Eastern States Office  
7981 Eastern Avenue  
Silver Spring, Maryland 20910

IN REPLY REFER TO:

6500

FEB 26 1976

Mr. Ralph Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

The BLM appreciates this opportunity to comment on the recovery plan for the Eastern Timber Wolf. The timing of your plan could not have been better, as a proposal for a program increase has just been submitted by this office. This program provides for habitat inventories and habitat management plans for the Timber Wolf and other wildlife on some 33,000 acres of NRL's within the North West sanctuary.

The following comments are submitted with the understanding that this plan has been prepared with one goal in mind - to formulate a set of management guidelines to ensure the survival of the Eastern Timber Wolf. It appears proper to mitigate the social and economic impact of this animal at this time. These impacts must be addressed before any agency can implement a multiple use management plan.

1. The recommended density levels for the two sanctuaries and the peripheral zone #2 will result in a total population of 1,520 wolves. The prey density levels required to sustain this population may be difficult to maintain without periodic curtailment or closing traditional deer hunting seasons. Are 1,520 wolves needed to ensure survival of this species in Minnesota or could this be accomplished at a population level that is less demanding on our deer herd?
2. The recommendations to manipulate vegetative types (122-112-1, 122-112-2, 122-112-3, 122-11 and 122-121) to increase the number of prey species, would not seem to promote a "naturally fluctuating" population, as suggested on page #5.



3. The two recommendations to re-establish woodland caribou (122-13) and to incorporate natural fire ecology in the management of the BWCA (122-115), seem to be antagonistic, as fires tend to destroy caribou habitat. The deer seem to be superior as a prey species and far less speculative and costly.
4. 123-1 recommends the improvement of forest composition to support pre-fawning deer populations of 10 per square mile. At the optimum suggested density of wolves, 1 per 50 square miles, this would result in 500 deer per wolf in zone #2.

123-4 recommends the regulation of deer and wolf harvests to maintain the population goals in 123-1. (500 deer/wolf)

123-44 recommends closing the deer season in zone #2 if deer densities fall below 2.5 deer per square mile. (125 deer/wolf)

These three recommendations contradict each other. (123.1, 123-4 and 123-44)

5. Zone #3 has an increased level of land use and thus the likelihood of live-stock-wolf incidents are greater. Wouldn't it be better to allow the unrestricted taking of wolves in this zone rather than restricting the harvest to authorized government employees as suggest in 124?
6. 122-112-3 recommends the creation and maintaining of permanent openings, while paragraph two of Part IV - Critical Habitat - recommends the discouragement of those activities which permanently remove forest cover. These two recommendations conflict with each other.
7. On page #37, Dr. Mech explains the reasoning for the recommendations to maintain a minimum prey density population of 2.5 deer/square mile in zone #2. A prefawning population of 2.5/square mile will result in a fawn crop of 1/square mile, 40% increase. The post-fawning population will then be 3.5 deer/square mile. The following decreases are suggested: .3/square mile for wolf kill (15 deer per wolf per year at a density of 1 wolf per 50 square miles), 1.5 for hunter kill, plus .9 additional kill by man because of increased accessibility, and finally .2 for a buffer. This will result in a prefawning population the following year of .6 deer/square mile.

Under the stated conditions, a prefawning population of 7.2 deer/square mile would be necessary to maintain a stable number of deer to cover the needs of both man and wolf in zone #2, rather than the recommended 2.5 deer/square mile.



A management plan which provides for a predator species is long overdue in the Lake States and I hope the preceding comments will be of some help to the recovery team. Thank you again for the opportunity to review and comment on your recommendations.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Lowell J. Udy". The signature is fluid and cursive, with the first name "Lowell" being more prominent and the last name "Udy" following in a similar style.

Lowell J. Udy  
Director, Eastern States







# UNIVERSITY OF MAINE *at Orono*

School of Forest Resources

Orono, Maine 04473  
207 583 7312

February 27, 1976

Dr. Ralph E. Bailey  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Dr. Bailey:

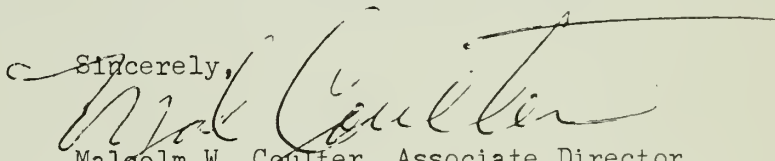
In this morning's mail I received a copy of the Recovery Plan for the Eastern Timber Wolf with your cover letter dated January 23, 1976. I do not know why it has been delayed on route so long. The envelope was well battered when it arrived this morning according to my secretary.

I would like to comment on this report, but I'm not certain that I can do this now by March 1. I have been surprised by all the comments in the outdoor columns in Maine newspapers in view of the fact a copy had not been received amongst some of the wildlife people nor to my knowledge been discussed in a preliminary fashion.

I will attempt to send comments but obviously this being Friday afternoon it will be exceedingly difficult to have them to you by Monday, March 1.

Thank you very much for the copy and I will review it this weekend.

Sincerely,

  
Malcolm W. Coulter, Associate Director  
for Wildlife, School of Forest Resources

MWC:MH



DEPARTMENT OF FISH AND GAME

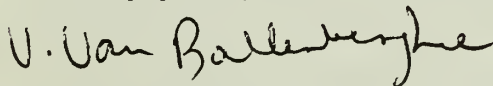
February 26, 1976

Mr. Ralph E. Bailey  
P. O. Box 190  
Marquette, Michigan 49855

Dear Ralph:

The Recovery Plan for the Eastern Timber Wolf reached me during the third week of February, 1976. Accordingly, I will not be able to submit my comments to you by March 1. I plan to have them roughed out by that date, however, and they should reach you by the end of that week. I hope the Committee will be able to consider them despite their lateness of arrival.

Sincerely yours,

A handwritten signature in dark ink, reading "V. Van Ballenberghe". The signature is fluid and cursive, with the first name "V." and last name "Van Ballenberghe" clearly legible.

Victor Van Ballenberghe  
Game Biologist



February 27, 1976

Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Gentlemen:

We are in receipt of your Recovery Plan for the Eastern Timber Wolf. After a thorough review of this masterpiece of deception, we can only conclude that the Watergate plumbers were a group of novices. Federal restriction of wolf control in Minnesota seems a bit strange, in that the Federal Fish and Wildlife Service carried on a vast wolf poison program from Texas to the Canadian border for more than 50 years.

Now that we have expressed our true feelings, we would like to know why only one person from Minnesota represented our state. We feel that the people of northern Minnesota have more to lose from the final decisions made on these studies than the federal government which was represented by five men. Furthermore, if federal bureaucrats are to govern our activities in this and other states, why do we need state legislatures?

For all intents and purposes the whole plan, in our opinion, is nothing but a covert action to insure continued job stability for those involved. Further, we believe the proposed program represents a back door approach to people control and gun control.

In no way do we agree that total protection be afforded wolves in the primary ranges (Zones 1A and 1B, Appendix A & B). The wolf sanctuary should be limited to the true boundaries of the Boundary Waters Canoe Area, as the Voyageurs Park will also serve as a sanctuary. This area is more than enough, afterall, there is no fence between the BWCA and the Quetico.

We are enclosing our recommendations concerning the recovery plan.







# Virginia Sportsman's Club

P.O. Box 718

Virginia, Minnesota 55792

## RECOMMENDATIONS FOR THE EASTERN TIMBER WOLF :

1. We are in full agreement with Mr. Rutski of the Minnesota DNR that the timber wolf is not endangered in the state of Minnesota and at this time we do not believe it to be threatened in any manner. Canada furnishes Minnesota with a steady flow of wolves that do not check in at customs when they cross the border.
2. The wolf sanctuary should be limited to the area comprising the true boundaries of the BWCA, or create a sanctuary in southern Minnesota where all the deer are located because of the lack of wolves.
3. Close deer season for one year provided that some form of predator control is carried on for at least a four month period (September, October, November, and December). Otherwise such a closing would be in vain.
4. Re-establish wolf populations at optimum levels in Michigan and Wisconsin providing the majority of their people are in full agreement after sufficient hearings are held.
5. A truthful educational, administrative or political program be initiated - it is time the public was told the truth about wolves. Misinformation that has been forced upon the public causing great emotionalism concerning wolves should be curbed as much as possible.
6. We believe that protectionist groups should be thoroughly investigated. Witness the fact that in New York City the Better Business Bureau studying the finances of the Animal Protection Institute found that of \$167,000 solicited from the public, only \$15,000 was used for the avowed purpose of the organization. Again the Oregon Better Business Bureau at Portland reports that a group there raised \$200,000 with only 19% being used for their avowed purpose. In California another protectionist group is under investigation.
7. Eliminate all funds for any further research relative to wolf-deer relationships. These repetitive studies serve no valid purpose, as the necessary facts have been known since the turn of the century.
8. We disagree that possibly \$7 million dollars will be spent on habitat for deer to feed wolves when the clear cutting of cedar in deer yards has been ruthlessly pursued by state and federal authorities. Winter cover is a necessity for deer. Summer habitat is sufficient provided predator control exists. Furthermore, there would be more sufficient summer habitat if state and federal authorities would unite their efforts and prohibit the herbicide spraying of forests, roadsides and powerlines.



RECOMMENDATIONS CONTINUED:


9. Elimination of snowmobile trails through deer yarding areas.

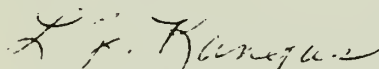
10. Logging should be permitted in the BWCA and the Voyageau Park area to create deer habitat and a control burning program should be carried on also. We feel it is better to make use of a natural resource rather than have termites destroy them.


In closing, we would like to state that we have never advocated the elimination of any animals or bird specie in our state. We hear so much about the "balance of nature" and we feel the present conditions in our woodlands is a very low balance or no balance at all with the prey species being at a very low level and predators at an all time high level. We are very concerned and what we would like to project at this time, is the use of a common sense approach to this very urgent matter.

Thank you for your time and consideration of our recommendations.

Sincerely,

  
Arvid Haurunen, President

  
L. J. Kangas, Vice President

  
Marilyn Skaudis, Secretary

cc Gov. Anderson  
Robert Herbst  
Rep. James Oberstar  
Sen. Mondale  
L. Greenwalt





March 1, 1976

Ralph E. Bailey, Leader  
Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Ralph:

I have reviewed the Recovery Plan for the Eastern Timber Wolf and, in general find it to be quite inclusive and comprehensive. I do have one comment relative to Part-2 of the plan - Re-establishing Populations. I do not see any specific mention of precluding hunting (including trapping) of big game and coyotes in the release areas at the time of the translocated wolf release, and for a period of time until the wolf population becomes established. It is almost certain that wolves would be taken accidentally if coyotes were to be available to hunters. Similarly, wolves would undoubtedly be in considerable jeopardy because of indiscriminant shooting during any big game season, in spite of the effort put forth in a public relations program. The translocated wolves must be afforded every possible advantage, just as prey species are in a reintroduction program by temporary and local predator control and closed seasons on themselves and species which closely resemble them. Perhaps this is the intent of the Recovery Team and was included in parts 222 and 223, page 13, of the Recovery Plan Outline; if not, I encourage you to give it consideration.

I wish you good fortune on this project and pledge our continued cooperation in the event that we can be of assistance in the future. We are currently involved with the translocation of Pine Martens to the Nicolet National Forest and Prairie Chickens to Crex Meadows via the gentle release and radio-telemetry analysis.

Sincerely,

Raymond K. Anderson  
Professor of Wildlife

RKA:mn





# Boone and Crockett Club



Frederick C. Pullman  
Chairman

Founded 1887 by Theodore Roosevelt  
For sport with the Rifle and Conservation

50 South LaSalle Street  
Chicago, Illinois 60606

## CONSERVATION COMMITTEE

February 27, 1976

Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Thank you for sending me the copy of the first draft of Recovery Plan for the Eastern Timber Wolf. Your plan appears to me to be thorough and well conceived. I am sure that your program in general would have our organization's support.

Without having a detailed knowledge of the areas involved, I am inclined to be sympathetic with Mr. LeRoy Rutske's position as explained in his letter to you of September 23, 1975. As you make quite clear in your proposal, it is of the utmost importance to avoid a situation that creates public hostility toward the program.

Also, I concur with the emphasis you have placed on the importance of managing the habitat, fire included, of the principal prey species.

Sincerely,

A handwritten signature in dark ink, appearing to read 'F. Pullman', written over a horizontal line.

FREDERICK C. PULLMAN

FCP:ala



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SUPERIOR NATIONAL FOREST  
P.O. Box 338, Duluth, Minnesota 55801

2630  
February 25, 1976



Mr. Ralph Bailey, Team Leader  
Eastern Timber Wolf Recovery Team  
Michigan Dept. of Natural Resources  
Box 190  
Marquette, Michigan 49855


Dear Mr. Bailey:

There is a definite need for an approved management plan for the timber wolf. We fully support the purpose of the Recovery Team and look forward to a plan which identifies the specific management needs to maintain the eastern timber wolf.

However, we strongly urge you to consider the practicability of the draft plan. It is our opinion that it could not be implemented in northern Minnesota since the specifics for habitat management are not given; the need for the large sanctuaries is not consistent with the expansion of the wolf population in Minnesota; and critical habitat elements are not listed. The establishment of a large critical habitat zone leads us to believe that existing Forest Service wildlife management coordination was not reviewed. With the deer population at 2/square mile over much of the Forest, is it realistic to develop and maintain a wolf population of 1/10 square miles? Is it realistic to maintain this density in the BWCA? Have you evaluated management opportunities in the BWCA?

We have enclosed the comments of a Forest team which reviewed the plan in detail. We ask that the Recovery Team carefully consider these comments. If the plan is to be effective, to actually provide for the survival of the wolf in Minnesota, it must be realistic and workable on the ground.

Sincerely,

  
JAMES F. TORRENCE  
Forest Supervisor

Enclosure



A N A N A L Y S I S  
O F  
R E C O V E R Y P L A N F O R T H E  
E A S T E R N T I M B E R W O L F

Prepared for the Forest Supervisor  
Superior National Forest

by

Richard T. Brewster, Chairman  
Merle McManigle  
Ralph Bonde  
William Gill





## RECOVERY PLAN FOR THE EASTERN TIMBER WOLF

- I. ANALYSIS SUMMARY
- II. NEED FOR ADDITIONAL INFORMATION
- III. APPLICABILITY FOR PRACTICAL MANAGEMENT
- IV. ZONE BOUNDARIES
- V. PLAN OBJECTIVES
- VI. POPULATION OF TARGET SPECIES
- VII. PUBLIC INVOLVEMENT



## RECOVERY PLAN FOR THE EASTERN TIMBER WOLF

### I. ANALYSIS SUMMARY

The Recovery Plan will insure survival of the wolf on the Superior National Forest and a viable wolf population adjacent to the Forest. There are several questions raised by this analysis relative to the extent of the Sanctuaries, target species populations and management actions needed to meet plan objectives. The committee has definite reservations as to whether the plan can or should be implemented in its present form.

The plan is based entirely on the ecological and biological aspects of the wolf and its primary prey. The plan does not address itself to the political and social realities within which it must be implemented. This was identified as a major weakness in the plan. The Recovery Plan and the specific actions proposed appear to have evolved out of context with multiple resource management. This makes any evaluation of the plan's practical applicability extremely difficult.

The plan is lacking in specific direction in relation to what habitat management is needed. There is no discussion of:

1. Existing prey or predator species, carrying capacity
2. Existing prey population levels
3. Existing habitat management relative to needs, and
4. Needed changes in habitat management

The plan has had no previous public input and there is no stated intent to provide for public review. This is another serious weakness, particularly in view of the extremely sensitive nature of the issue. The Recovery Team did not include any disciplines other than wildlife biologists. The total effect of these two situations will be to increase adverse public reaction and to weaken the plan's credibility with resource managers. The plan needs major revisions in format, recommended actions, and review process. The committee feels that the plan could be a good initial step in setting long term management goals for the Eastern Timber Wolf. A primary need in the next revision is a more detailed treatment of short-range habitat management goals.



## II. NEED FOR ADDITIONAL INFORMATION

The following are some areas which we identified as needing clarification.

1. What portion of the primary wolf range is critical habitat, i.e. necessary for survival of the species?
2. What is the carrying capacity of the primary range for deer?
3. What is the extent of habitat improvement needed to support the desired prey population levels?
4. What changes would be needed in application of habitat diversity guidelines? These guidelines are designed to accomodate a variety of wildlife species, whereas, the objectives under this plan is to maximize deer, moose and beaver populations as prey for the wolves.
5. What is the existing deer population within the various zones? Recent data from a survey in the Isabella area indicates ranges from zero to 1.8 over a 153 sq. mile area.

The above information would give the reader a more realistic framework within which to judge the plans' worth as a management tool. The lack of discussion as to how particular alternatives were selected by the Recovery Team made it extremely difficult to analyze the resulting plan. The plan presents the final decision and the reader is left to judge the validity of the decision without the necessary background information. There is no flow of thought from situation analysis, problem identification through problem solution. There is no analysis of potential problems related to plan implementation. The plan limits itself entirely to the biological and ecological considerations of the wolf and its prey.

## III. APPLICABILITY FOR PRACTICAL MANAGEMENT

The review committee was able to identify several areas of concern relative to the practicality of management:

1. Interior Zone of BWCA. It is not practical to assume that significant vegetative manipulation can or will be done in this area. It is the area of poorest deer habitat and will never support sufficient prey density.
2. Portal Zone of BWCA. It is also questionable, assuming logging is ever permitted in this area, that it will be permitted to the extent needed to maintain 1 wolf per 10 square miles.
3. Eastern Sanctuary (1B). It was the unanimous opinion of the review committee that the sanctuary should be reduced in area by eliminating all area south of State Trunk Highway #1.
  - a. Much of the area south of Highway #1 is poor to marginal deer habitat. It is primarily black spruce, balsam and low-quality aspen.
  - b. There are considerably greater existing developments south of the highway, including communities, mines, railroads, etc.





- c. The review committee did not feel that the area under discussion was essential to survival of the wolf in Minnesota and that inclusion of the area could generate severe adverse public reaction to the plan.

#### IV. ZONE BOUNDARIES

The boundary of all zones must be identifiable on the ground. This requires the utilization of named streamcourses, roads and lakes. The National Forest boundary would be a very poor choice. The revised boundary of Zone 1B should follow State Trunk Highway #1 to Ely thence west on Highway #1 to County Trunk #408. It should follow County Trunk #408 to the north shore of Lake Vermilion, thence, along the north shore of the lake to the Vermilion River. It should follow the Vermilion River to Marion Creek, to Marion Lake, to the south shore of Long Lake, to the creek connecting Long and Moose Lakes, thence along the Moose River to the Voyageur National Park.

The committee did not develop any recommendation in reference to zone 1A. Our discussion did surface the concern that this alternative may receive considerable attention from the state of Minnesota, particularly in view of the Minority Opinion by Mr. Rutske which appears in the appendix of the plan.

#### V. PLAN OBJECTIVE

The objective of this plan is stated in at least two different areas of the plan and the authors are not consistent in what is the primary objective. Under Part III, "Plan Objectives and Rationale", the primary objective (in Minnesota) is to insure survival of the animal. The objective stated on p. (8) is "Maintain and re-establish viable populations of the Eastern Timber Wolf in as much of its former range as is feasible". A close review of the "Recovery Plan Outline" establishes the latter objective as the primary one in Minnesota. This goes considerably beyond the requirements of the Endangered Species Act. The objective and the means of reaching it become more questionable when the following statements within the plan are considered:

- P. 4 - "Despite an annual kill of 20 to 30% of the estimated number of wolves in Minnesota, there has been no noticeable decline in the statewide population"
- P. 6 - "Within Minnesota, however, the team recommends, 7 to 1, that the classification be changed to threatened. ... At present, the wolf population seems secure."
- P. 7 - "Because wolves have survived so long in Minnesota despite bounties and year-around hunting and trapping, there may be a question as to why any restrictions need be placed on the taking of the wolf".
- P. 8 - Recovery Plan item #121 - "Demonstrate to the public that the Minnesota wolf population is secure and that through ecologically sound management will remain secure."

The above statements are presented out of context, but they do serve to underscore several concerns of the review committee:



1. It seems of questionable necessity to attempt to maximize wolf numbers in the primary range. (Item 122 of Plan Outline)
2. It is questionable whether a population of 1 wolf or 80 deer per 10 square miles is either biologically sound or possible over much of the primary range.
3. There will be considerable resistance to the regulation of deer, moose and beaver harvest by man when the biologists state that the target species' survival is not in question.
4. The plan stresses a strong biological and ecological base, yet the action phase describes an entirely artificial manipulation of prey species populations to insure survival of the wolf. In fact, harvest restrictions are proposed as a cure for declining populations in areas where it is known that habitat condition is the key. The maximization of the population of selected species of wildlife without consideration of the effects on the total biotic community, including man, would appear to warrant serious question.
5. The biological and ecological considerations only include man where his activities do not adversely affect the target species. Man is a part of the environment and his influences will continue to be felt by the wolf, particularly outside of the BWCA. The authors assume a very difficult, if not completely unrealistic stance, when they propose that all of man's activities within the primary range be subjugated to maintaining maximum wolf populations. This premise would appear to ignore political and social reality.

#### VI. POPULATION OF TARGET SPECIES

The words "maximum", "optimum", "viable" are used to describe desired population levels of prey and predator. Except for the wolf, there is no indication of present population or carrying capacity. This does not give the reader any frame of reference within to determine what is being proposed. Attempts to maximize prey populations could result in curtailment of all sport hunting. This is another example of what, from the biologists view is justified, but would never be accepted by the public as either necessary or reasonable. The role of sport hunting and trapping in this part of the state is not addressed. It has been, is, and will continue to be a valid concern of the public. The plan suffers by not presenting the complete picture. What will be the hunter's role in the future if the present plan is approved? What will be the effect on length of deer season, beaver trapping, moose hunting? There are consequences which must be presented and weighed against the benefits accrued from the plan.

#### VII. PUBLIC INVOLVEMENT

The plan proposes several actions which, by themselves, are of critical concern to the public. Examples are the restriction of development, restriction of prey hunt by man and the maintenance of a viable wolf population in Zone 2. The lack of public involvement to date combined with recent press leaks, will only serve to make acceptance of the plan more



difficult. The Recovery Plan Outline stresses this need and yet the public has not been consulted to date. The lack of early public awareness of plan preparation, plus the increasing public frustration with early news leaks may be the most critical shortcoming of the planning process. It is very doubtful whether the public education effort outlined on (p. 8) will overcome these handicaps. Assuming that the plan can be processed through to final signatures without public or other agency involvement, what type of reaction will the plan receive when implementation starts? As stated in the plan, the issue is a highly charged emotional one and controversy cannot be avoided. It is the review committees' opinion that the process being followed is one which will prolong and increase the controversy. The final, and probably most lasting effects may be felt by the target species through the inability of the plan to function effectively and through direct action of the affected local public.

Richard Beuster

Chairman

Review Committee







United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

MINNEAPOLIS AREA OFFICE  
831 SECOND AVENUE SOUTH  
MINNEAPOLIS, MINNESOTA 55402

IN REPLY REFER TO:  
Land Operations


FEB 2 1976

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters, P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

For your information, we are enclosing three additional letters we received with comments on the recovery plan of the Eastern Timber Wolf after our reply to you dated January 28, 1976.

Sincerely,

  
Acting Area Director

Enclosure





# United States Department of the Interior

## BUREAU OF INDIAN AFFAIRS

RED LAKE AGENCY

REDLAKE, MINNESOTA 56671

Bureau of Indian Affairs
RECEIVED
FEB 02 1976
MINNEAPOLIS

IN REPLY REFER TO:

January 30, 1976

### Memorandum

To: Area Director, Minneapolis Area

From: Superintendent, Red Lake Agency

Subject: Comments on Timber Wolf Recovery Plan

I am enclosing comments on the above subject from the Red Lake Agency Forestry Branch and Agricultural Extension Service. The undersigned has lived on the Red Lake Reservation for the past twenty-five years with the Indian people and feels that certain knowledge on this subject has been acquired from the Indian people as well as farmers and conservationists in the surrounding area.

This subject has also been discussed with tribal people, forestry aids, Tribal Council, and local game wardens. Here is their opinion. The timber wolves will never become extinct in Minnesota. They have always been present on the Red Lake Reservation. Reasons given are as follows:

1. Too smart an animal for the average hunter.
2. Minnesota forest areas connect directly with the large wild Canada area which provides a large route for wolf and other predatory animals to enter Minnesota.
3. There is need for control; since the bounty has gone off, this animal has increased considerably on the Red Lake Reservation.

The forestry aids all state that since the bounty has gone off they have noticed a sizable increase of wolf concentration on the Red Lake timber areas. Last week one aid reported three in one pack as he was out scaling pulp. Deer have moved out of certain areas where wolf concentration is too heavy. One forester aid reported that last year while cruising timber sales on the Ceded Lands north of the Red Lake Reservation that in one 40-acre plot they found six dead deer killed by wolves. Another area they had to travel six miles past Rapid River to reach a Red Lake timber plot and discovered 13 dead deer on the way killed by wolves.



These same complaints have also been heard at Tribal Council meetings from tribal members and representatives. This has all come to pass since the wolf bounty was discontinued. Before this time, many local Indians spent more time and effort to hunt the wolf. Also some of the older Indians would spend time in the spring of the year tracing the night wolf call to find their den and sell the young for bounty. I remember George Benais selling over ten one spring.

My recommendation is no plan; the wolf can survive in Minnesota as it is a vast northern wild area. The present wolf population is too high and is doing extensive damage to deer and livestock in the rural farming areas.

The Tribal Chairman stated that we have to take other measures in our hunting practices both on and off the reservation.

Just about everybody has a high-powered rifle and scope and scaffle, 7 to 10 feet high, for shining. This method of hunting can kill about anything that moves. Recently, one of our members shot a neighbor 400 yards distant on a snowmobile during a hunting expedition.

We recommend that they should get after gun manufacturers and reduce the gun range, scopes, shell velocity for both rifle and shotgun. This would give our wild life a better chance for existence.

I highly recommend that we take this avenue to decrease the slaughter of wild animals than the route of setting aside large areas for wild-life habitat. This is just food for thought that I observe and obtain here at Red Lake.

  
Superintendent

Enclosures







United States Department of the Interior  
BUREAU OF INDIAN AFFAIRS  
RED LAKE AGENCY  
REDLAKE, MINNESOTA 56671

IN REPLY REFER TO:

January 22, 1976

Forestry

Memorandum

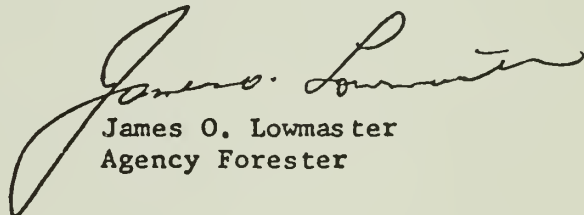
To: Superintendent, Red Lake Agency

From: Branch of Forestry, Red Lake Agency

Subject: Comments on Recovery Plan for Eastern Timber Wolf

Branch of Forestry is in agreement with the Recovery Plan Objectives as outlines on pages 8 through 14 of the Plan. For cultural and ecological reasons it is desirable to maintain the wolf population, in wilderness areas, at a level approximating the aboriginal; in less remote areas that population should be controlled at a level compatible with the human population.

The Eastern Timber Wolf is present on the Red Lake Reservation, although the density of its population is unknown. Should the Recovery Team wish to include the Diminished Reservation in its project, with the concurrence of the Tribal Council, the Branch of Forestry would be cooperative.

  
James O. Lowmaster  
Agency Forester





UNIVERSITY OF MINNESOTA

AGRICULTURAL EXTENSION SERVICE

Red Lake Indian Reservation  
Redlake, Minnesota 56671  
(218) 679-3366

January 27, 1976

To the best of my knowledge the "Recovery Plan for the Eastern Timber Wolf," is a workable management program that will protect the Eastern Timber Wolf.

I would be interested to know how the wolf census is conducted and how accurate it is. There is considerable difference between the census of 1970 and the recent one in the recovery plan.

On page five (5), paragraphs two and three, I agree with this type of Timber Wolf management program. This plan includes protection in areas that are native to the timber wolf and control in unwanted areas (livestock areas).

A handwritten signature in cursive script that reads "LeRoy A. Stumpf".

LeRoy A. Stumpf  
Acting Extension Agent





FUR TAKERS OF AMERICA

Geo. R. Liljestrand

517 E. Gustavus Ave.

Fergus Falls, Minn.

56537

Feb. 27, 1976

Mr. Ralph E. Bailey, Chairman  
Timber-Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Ralph,

As requested I have reviewed the Recovery Plan for the Eastern Timber-Wolf that you sent to me. I have read and re-read this proposed plan three times.

Considering the importance of this plan to Minnesota and to me as a trapper- and also to the Minnesota Trappers Ass. who I wish to represent now these are my comments

First I am specifically familiar with Zone 1A as your plan describes the Northwestern section of primary range.

To be more specific I have been trapping an area between Upper Red Lake and Lake of the Woods for a number of years.





FUR TAKERS OF AMERICA

Geo. R. Liljestrand

517 E. Gustavus Ave.

Fergus Falls, Minn.

56537

I have a cabin between Fountown and  
Lake of the Woods on the edge of the  
Beltrami Island study area. After traveling  
this area by snow shoe in winter and  
canoe in summer this is my opinion  
of the present wolf (canis lupus) population.

About ten years ago or 1966 in this same  
area I observed a small or very slight  
wolf population. The fox-coyote-beaver  
and deer-population was stable.

This stable population of these animals  
remained ~~until~~ <sup>1969</sup> until about 1970. Then  
I observed a change. First the coyote  
population increased - the fox decreased.  
The deer-population and moose was  
stable until 1972-1973







FUR TAKERS OF AMERICA

Geo. R. Liljestrand

517 E. Gustavus Ave.

Fergus Falls, Minn.

56537

Then I observed a drastic change <sup>down</sup> in deer populations in the remote part of zone 1A. However the marginal or perimeter of this area still had a stable deer population. It was during this period, this same time 1972-1973 I observed a very substantial increase in the wolf population. This increase in the wolf population has continued until now 1976. Also the observation of the perimeter shows more wolf sign near the edge.

From this observation of a living increasing wolf population I wish to make this statement.





FUR TAKERS OF AMERICA

Geo. R. Liljestrand

517 E. Gustavus Ave.

Fergus Falls, Minn.

56537

Because of the close proximity  
of this area (Zone 1A) to Canada..

Because of the past and present  
increase in wolf populations of  
this area.

Because I believe that the Eastern  
Timber-Wolf (in Minnesota) is neither  
endangered or threatened I recommend  
not to establish a timber wolf sanctuary  
in the North west or Zone 1A.

Sincerely

Geo. Liljestrand

Minnesota Trappers Ass.





# Help Our Wolves Live

A citizens' committee seeking to protect the *Timber Wolf* from the threat of extinction.

February 26, 1976

Eastern Timber Wolf Recovery Team  
Box 190  
Marquette, Michigan 49855

Gentlemen:

We have reviewed the preliminary draft of the recovery plan for the eastern timber wolf. The plan documents well the reasons for the decline in wolf populations throughout the United States and the main factors critical to the long range survival of the wolf. As we view the problem, the key to wolf survival is identified on page six where the report states: "However, ultimately the welfare of the wolf depends on the availability of large tracts of wild, inaccessible land with adequate prey numbers." That simple statement summarizes what needs to be done to insure keeping the wolf as a viable member of our nations wildlife heritage.

1. Tracts need to be large.
2. They need to be wild and inaccessible which implies minimal human-wolf interaction.
3. They need to contain adequate prey numbers which to us means management efforts aimed at increasing the prey species, not at reducing wolf numbers.

We were pleased to note that the recovery plan has several recommendations that are designed to increase wolf numbers in the United States. We support these:

1. Transplanting wolves to the six identified areas in the northeast United States and the southern Appalachians.
2. Further studies of wolf numbers, distribution, population trends, limiting factors, prey requirements and affects on prey, including domestic animals.
3. The publication of technical data and the production of movies, TV programs and popular literature on wolf ecology.
4. Habitat improvement designed to increase the number of prey species available.
5. The development of land use regulations compativle with the perpetuation of critical wolf habitat and the use of Environmental Impact Statements to evaluate project impacts on the wolf.
6. The introduction of woodland caribou into suitable range.
7. Provision of concerted law enforcement efforts.

However, we cannot support these recommendations that depend on declassifying the wolf from an enoangered to a threatened species. We believe that the wolf must remain an endangered species until it is successfully reintroduced into at least the six areas





February 26, 1976

identified by the recovery team.

1. Taking wolves to bring predator and prey relationships into balance. We believe this to be a self correcting mechanism - fewer deer will automatically lead to fewer wolves. If the deer herd is declining, habitat improvement efforts should be undertaken to increase the number of deer instead of attempting to reduce the number of wolves.
2. The opening of a hunting and trapping season on the wolf.

We also disagree strongly with the position taken by the Minnesota Department of Natural Resources and expressed in Mr. Rutske's minority report letter dated September 23, 1975. He recommends total declassification of the timber wolf within Minnesota on the grounds that the wolf is neither threatened or endangered within the State. The key words are "within the State". Using Mr. Rutske's logic, the whooping crane and the Kirtland's warbler should also be declassified since they are not endangered "within the range" they now occupy either. The whole purpose of the Endangered Species Act is to protect those animals whose range has been reduced to a tiny fraction of its original size. If, as is the case with the wolf, the range is reduced by 97%, that fact alone is ample justification for retaining the wolf as an endangered species.

Our recommendation is to retain the Eastern Timber Wolf on the Endangered Species List until it has been successfully reintroduced into at least the six areas identified in the Preliminary Draft of the Recovery Plan dated November, 1975. Once the wolf is established in a number of different areas, lessening the probability of its total disappearance, consideration could be given to reclassifying it as a threatened species.

Very truly yours,

*Warren E. Roske*

WARREN E. ROSKE  
Chairman, HOWL

WEH:jo





SIGURD F. OLSON

106 WILSON EAST-ELY, MINNESOTA 55731

2/26/76

Dear Mr. Bailey:

I appreciated very much receiving the draft of the Recovery Plan for the Eastern Timber Wolf. I do have a special interest in the plan and the very comprehensive effort you and the members of the team have put into it. As you perhaps know I did the first study in this particular area back in the twenties and early thirties and since those days I have watched with great interest all the research that has been done.

The land has changed since those early days and the vegetation has matured to the point where the future looks rather dim from the standpoint of there being enough browse for deer and moose to support a reasonable population of their predators. The environment of fifty years ago right after tremendous logging followed by widespread fires resulted in a heavy deer population and of course wolves. Now the great question is how far to go to reemstate those bygone habitat conditions, the big question of course being can this be done through spot logging, clearing, and burning within BWCA without destroying wilderness atmosphere. Fortunately the BWCA is only a third of the Superior National Forest and this leaves approximately 2 million acres in which this can be done, land with little human population, practically no farming as such. I am speaking of both Zone 1B and 1A. I personally am opposed to further logging in the Portal Zone of BWCA or any manipulation such as creating openings or clearings but I am not opposed to letting natural wildfires run their course within reason, or even artificially created burns. I certainly would not like to see the whole country go or even large parts of it, even though the history of the last ten thousand years has been exactly that.

You are right that any final plan must include public education on a wide and varied scale and the members of the team are in full agreement on that.

As to whether the wolf should be considered as Endangered or threatened, I would agree with your conclusions that it should be taken off the endangered category where no possible control is had. If it stays on the endangered list, I am afraid the whole program will backfire due to the hazards in Zone 2, and 3, both peripheral, and the common fear and hatred of the animal generally by those who really do not know the score.



I like the idea of transplanting wolf stock in the east, especially in the Adirondaks and in Maine and possibly the White Mountain Area of New Hampshire, even the Smokies. It is certainly worth a try but again you will have to precede it with a lot of education, except in isolated places such as the interior of Maine.

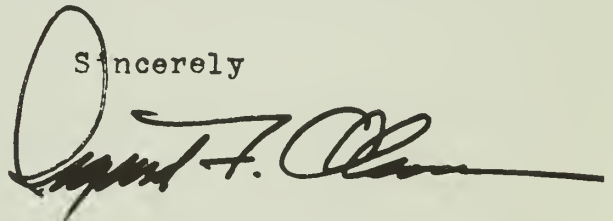
Whether caribou can be successfully brought back is another question. This used to be caribou country and the deer really did not begin to come out until the advent of human occupation and the logging and mining just before the end of the century. Now with the country becoming mature ecologically there must be plenty of caribou browse but knowing the caribou up in Alaska and Canada, especially the woodland caribou, I wonder. I know the barren ground Taiga types of NW Territories as far as the Arctic. It is worth a try and it may work out beautifully.

As you say in the draft, the entire question of maintaining a satisfactory wolf population is an extremely complicated one and should extensive copper nickel mining or even ordinary taconite move into Zones 1A and 1B then it will become increasingly difficult.

An encouraging factor is the ability of wolves to maintain good populations in spite of 50% reduction as demonstrated in Alaska. No doubt they could survive here too though it is doubtful that they could stand that high an annual loss but they should certainly take a 30% loss. I am thinking of caribou in Alaska and deer here.

Again many thanks. I really enjoy going it over which I have done in detail.

Sincerely

A handwritten signature in dark ink, appearing to read "Sigurd F. Olson", with a large, looping initial "S" at the beginning.

Sigurd F Olson







STATE UNIVERSITY OF NEW YORK

# COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

ACUSE CAMPUS  
ACUSE, NEW YORK 13210

SCHOOL OF BIOLOGY, CHEMISTRY, AND ECOLOGY

February 23, 1976

ACUSE CAMPUS  
ACUSE, N. Y. 13210

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State University  
Polymer Research Center  
Forest Service  
Cooperative Research Unit

NBERRY LAKE CAMPUS  
NBERRY LAKE, N. Y. 12927  
Charles Lathrop Pack  
Demonstration Forest  
ranberry Lake  
Biological Station

COMB CAMPUS  
COMB, N. Y. 12852  
her & Anna Huntington  
Wildlife Forest  
ondack Ecological Center

LY CAMPUS  
Y, N. Y. 13159  
eiberg Memorial Forest  
Genetic Field Station

NAKENA CAMPUS  
NAKENA, N. Y. 13695  
Forest Technician Program

RRensburg CAMPUS  
RRensburg, N. Y. 12885  
Charles Lathrop Pack  
Demonstration Forest  
ummer Field Program

Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, MI 49855

Dear Ralph:

Thank you for including me in the review of the "Recovery Plan for the Eastern Timber Wolf". In return, I have enclosed a copy of two project proposals developed last year; the proposals are two of several which comprise a total research program on the management of wilderness and/or extirpated or endangered species in the Adirondack Region of New York. Copies of the total program have been forwarded to nearly every organization which might have an interest in funding these studies, in part or as a whole. This includes groups from Audubon and Defenders of Wildlife to Boone and Crockett Club to the New York State Department of Environmental Conservation and the office of Endangered Species, U.S.F.W.S. To date there has been no offer of support for the proposed canid studies; limited support has been offered by the Wildlife Management Institute for the proposal dealing with attitude surveys. This latter proposal was derived from and is so closely related to the other proposals that no action is currently contemplated according to my last contact with Rainer Brocke who is coordinating the program.

The canid proposal as described would primarily provide the information called for in Sections 212 and 215 of the Recovery Plan, namely: 212 - Determine deer (moose) and beaver densities in the selected areas and 215 - Estimate effects of establishing wolves on other wildlife and domestic animals. Dr. Robert Henshaw, with whom you may be familiar, recently completed an appraisal of land ownership, land use, human and livestock density which he presented at the recent New York Chapter of The Wildlife Society meeting. His efforts appeared to largely satisfy the needs expressed in Section 211 and 213 by identifying those tracts of significant remoteness, size and low human density in the Adirondacks of New York.

Most of us recognize that the social problems in any wolf reintroduction will be very difficult if not insurmountable. Efforts to educate will be time consuming, expensive and filled with frustrations





For these reasons, I believe we should first arrive at the decision on ecological feasibility. There would be little gained and much to be lost from a prolonged series of heated public encounters only to finally discard the effort for reasons related to ecological suitability. To this end, I will pursue the goals outlined in the project proposal which deal with assessing deer and beaver availability in those areas outlined by Henshaw as being otherwise suitable as release sites. Although much of this data should be available from New York's Bureau of Wildlife records, it may require some additional surveys of beaver abundance.

As regards the content of the Recovery Plan itself, I would like to make the following suggestions:

Section 233-6 Accumulate wolves until 5 or more are obtained.

Comment: I would recommend that any release consist of 20-75 animals; that there be 4-5 groups, of 5 animals each, released simultaneously in a 400-500 sq. mi. area. This would minimize the impact of losing a few individuals through dispersal or mortality and increase the opportunity for pairing of segregated individuals from adjacent packs. It would require greater initial expense for holding facilities and capture efforts, but would decrease the investment of resources over a long period of time, such as might be necessary for repeating several small releases. It seems likely that a more intensive, saturation-type release would have a much greater chance for success when one considers the factors contributing to potential failure-dispersal and mortality.

Section 235-3 Hold wolves on release site for 2 weeks.

Comment: This period should include an effort to "educate" these wolves to traps, guns and perhaps even poison baits. Presenting them with the most-used trappers' sets wherein small size traps are used, antagonistic treatment by handlers and possibly the use of emetics on certain treated foods may help the original, released animals ~~passed~~ some of these dangers following release. This may require holding them longer than 2 weeks.

One other major problem we will have in the Adirondacks relates to current legal and societal attitudes toward land management in the Adirondacks. Due to current restrictions on logging and burning on public lands within the Adirondack Park, we can expect that deer and other prey species may exist in greater densities on private holdings,



February 23, 1976

particularly lumber company holdings. The potential for wolf populations to eventually concentrate on these lands and occur in lesser densities than on public lands could pose a significant problem to their acceptance and management. The sections in the Recovery Plan (122-112-1,3,4; 122-122; 123-1) which accentuate the need for habitat maintenance through logging and fire only highlight the need for accommodations in current land use regulations in the Adirondacks prior to any release. The long term prospect for deer and beaver populations under existing regulations is a steadily declining carrying capacity.

I trust that the preceeding comments will be useful to your team. Simultaneously, I would like to ask if there is any prospect that you may be aware of for federal funding of any or all of the wild canid studies we have proposed to undertake in New York.

I would be most happy to receive any reactions you may have to the ideas in this letter or the proposal itself.

Sincerely,



Robert E. Chambers  
Associate Professor  
Department of Forest Zoology

REC:cmn

Encs.

cc: W. Heckling  
L. D. Mech  
S. Free  
R. Brocke



## Research Proposal

### REINTRODUCTION OF THE TIMBER WOLF IN ADIRONDACK PARK: PHASE I - FEASIBILITY STUDIES

A Project of

THE ADIRONDACK WILDERNESS FAUNA PROGRAM

Sub-project I: The potential interactions of the eastern coyote *Canis latrans* var. and the timber wolf *Canis lupus lycaon* in Adirondack Park.

Sub-project II: Assessment of biological, ecological and sociological factors in the reintroduction of the timber wolf in Adirondack Park.

#### Principal Investigators and Institutions:

Dr. Robert E. Chambers  
Associate Professor  
S.U.N.Y. College of Environmental Science and Forestry  
Syracuse, New York 13210

and  
Mr. Peter N. Gaskin  
Associate Professor  
Jefferson Community College  
Watertown, New York 13601

Project Duration: 3 years

Project Total Costs:	Sub-project I	30,720
	Sub-project II	<u>19,830</u>
	Total	50,550

Program Coordinator: Dr. Rainer H. Brocke  
Adirondack Ecological Center  
S.U.N.Y. College of Environmental Science  
and Forestry  
Newcomb, New York 12852  
(Phone 518 582-4551)





## THE PROBLEM

The timber wolf had disappeared from the Adirondacks of New York prior to 1900, with the advent of intensified human activity, large-scale lumbering and the extirpation (or nearly so) of some prey species including the moose and beaver. The timber wolf is currently classified as an endangered species in the lower 48 states, but is still common in much of Canada and Alaska. As such, there are currently several efforts underway to restore the timber wolf to those parts of its former range which are deemed suitable for reoccupancy. The Adirondacks of New York, as one of the few major wilderness-type areas in the Northeast, appears to be an area worthy of consideration for such reintroduction.

Significant changes have occurred in the Adirondack fauna since the extirpation of the wolf. White-tailed deer have greatly increased in this logged-over region and now exist in densities which oscillate, depending on the severity of Adirondack winters. The eastern coyote has established itself within the past forty years and is locally abundant; the relationship of coyote populations to deer populations in the Adirondacks is unknown. Beaver populations have recovered from their earlier heavy exploitation. Certain scavenger species--notably the raven and bald eagle--have become extremely scarce. In addition, man and his settlements are now scattered throughout the Adirondacks.

In the face of these changes, it is an open question whether the timber wolf can be reintroduced in Adirondack Park. Certainly, the recent failure of an attempt to reintroduce the wolf in Michigan (1974-75) indicate that a careful feasibility study must precede any considerations to reintroduce this species.

## BACKGROUND AND RATIONALE

The proposed research will be conducted as two sub-projects. The discussion below follows these categories:

Sub-project I: The potential interactions of the eastern coyote *Canis latrans* var. and the timber wolf *Canis lupus lycaon* in Adirondack Park.

Since their first recorded appearance in the Adirondacks in 1936, coyote-like animals and their progeny expanded their range to include all of the Adirondacks and adjacent counties in New York by 1959 (Severinghaus 1974); similar animals have also invaded and occupied several New England states (Silver and Silver 1969, Richens and Hugie 1974) and the southern tier counties of New York. Taxonomic studies by Lawrence and Bossert (1969) and Gaskin (1975) and behavioral studies by Silver and Silver (1969) have agreed that this animal should be designated the eastern coyote *Canis latrans* var.



Since 1970, a variety of observations have been made on this species in the northern Tug Hill and central New York area; Post et al. (1975) have conducted preliminary studies on radio-tracking and have reported on movement and activity patterns in Jefferson and Lewis Counties; Chambers et al. (1974) and Glatz (1974) and Parrow (1973) have reported on food habits from several areas within New York. A study of the food habits of coyotes in the Adirondacks from 1956-61 by Hamilton (1974) is the only organized investigation of the coyote in that region to date. There is currently no data available on population densities of the eastern coyote in the Adirondacks or any part of New York, nor on the competition of the coyote with other predators such as the bobcat, fisher and red fox for existing food sources.

The role of the coyote as a predator on the white-tailed deer has not been clearly defined. Such knowledge is crucial if one is to appraise the ecological impact of reintroducing the timber wolf. Hamilton's data on food habits of Adirondack coyotes (1974) show that the bulk of their diet (77% occurrence) consists of white-tailed deer and snowshoe hare *Lepus americanus*; the greater importance of deer in the winter diet (39.2% occurrence) coupled with the reports of Ozoga and Harger (1966) from Michigan suggest that coyote use of deer is primarily as a scavenger of hunter- and winter-killed deer. However, the occurrence of deer (17-33% occurrence) in the summer diet of Adirondack coyotes (including fawn hoof fragments) and recent reports (Beasom 1974, Ogle 1971) from western states which indicate significant mortality to deer, both fawns and adults, by coyote predation suggest the need to clarify coyote-deer relationships in the Adirondacks, particularly as they might relate to the reintroduction of the timber wolf.

Sub-project II: Assessment of biological, ecological and sociological factors in the reintroduction of the timber wolf in Adirondack Park.

All studies of timber wolf food habits show that predation on large ungulates is the primary means of existence of this carnivore (Mech 1966, 1970; Mech and Frenzel 1971; Pimlott et al. 1969) and that white-tailed deer are highly preferred. Reestablishment of timber wolf populations in the Adirondacks would obviously depend on the availability of sufficient numbers of deer for their existence. Voigt et al. (1975) have recently demonstrated increased utilization of beaver *Castor canadensis* by wolves in the face of declining deer populations in certain sections of Ontario. Others (Mech 1966, Pimlott et al. 1969) have also demonstrated the use of beaver as a prey species by wolves during ice-free periods of the year.

Although snowshoe hares may be taken by wolves, as well as a variety of other smaller mammals, the welfare of wolf populations in the Adirondacks would depend largely on the availability of white-tailed deer and beaver. Any appraisal of the suitability of



potential wolf range in the Adirondacks would therefore need to include population data of these two prey species. Apart from food resources, we must know about 1) the availability of sufficiently large forested areas remote from intense human activity, 2) the interaction of wolves with existing or other reintroduced fauna, and 3) the attitude of the surrounding human community.

The latter is a very crucial factor in the reintroduction of wolves. Ultimately, the potential level of human acceptance of the wolf in the Adirondacks may be the single most important factor in the potential survival of reintroduced wolves. The land ownership pattern in Adirondack Park is a checkerboard of private and state-owned lands. Undoubtedly, the presence of wolves will interfere with human interests. Perhaps the key question is to what extent these interferences will be accommodated by man. The present record of human tolerance for the wolf in the United States and Canada is not encouraging. The potential human response to the re-establishment of wolf populations will not be measured in this investigation as the topic will be pursued in another study of this program (See "Attitudes of Adirondack Residents and Recreationists Towards Reintroduction of Native Fauna", to be conducted by G. Reetz and T. Brown.)

There appears to be a sufficient extent of remote, forested areas within the Adirondacks to justify considering the reintroduction of timber wolves in Adirondack Park. The Adirondack Park consists of approximately 9,000 square miles of largely-forested land, 39 percent of which is in state ownership; sufficient areas of remote forest land exist such that the Temporary Study Commission on the Future of the Adirondacks (1970) has recognized and recommended the establishment of 15 Wilderness Areas comprising a total of 1,500 square miles within the Adirondack Park. An additional 1,800 square miles of the park has been recommended to be kept as Wild Forest, much of it contiguous with the Wilderness Areas. Clarke (1970) in his recent appraisal of the wildlife resources of the Adirondacks states "...the continuous areas of wild lands in the Adirondacks now are quite comparable to areas in which wolves have persisted both in Canada and Europe, including some in Ontario at no great distance."; he further states, "This species (wolf) heads the list of those vanished which might be restored".

The influence of wolf populations on other Adirondack fauna may be either positive or negative. It is believed that the disappearance of coyotes from Isle Royale was due to the establishment of the timber wolf (Krefting 1969). The impact that wolf populations do or may have on bobcat, or reintroduced lynx and/or cougar populations, either directly or indirectly, should not be overlooked and warrants careful consideration. Studies in Minnesota (Mech and Frenzel 1971) and Ontario (Pimlott et al. 1969) suggest that the impact of wolf predation on deer hunting success by man is negligible; data shows that hunters and wolves rely on different segments of the deer population; hunters take the yearling and middle-age classes and wolves the fawns and older age classes. The primary effect of wolf predation on deer has been to increase the thrift and productivity of the herd.





Certain scavenger species--ravens, crows, fishers, red foxes, eagles and others--are known to benefit from the presence of wolf-killed deer during the winter months in northern snowbelt areas (Mech 1966, Pimlott et al. 1969). It is conceivable that the absence of the wolf in many northern areas may be a contributing factor to low numbers of certain scavenger species. Although carrion is provided by winter mortality of deer in the Adirondacks (Severinghaus 1972), the magnitude is variable from year to year and usually occurs in the late winter period only. The more regular availability of carcasses from periodic wolf kills would offer a more sustained, winter-long food supply to scavenger species.

In sum, the potential ecological and sociological interactions of the timber wolf in Adirondack Park are complex and require careful consideration before any action is taken to reintroduce this species.

## OBJECTIVES AND PROCEDURES

Sub-project I: The principal objectives of this sub-project are:

1. To assess population characteristics of the eastern coyote in Adirondack Park, including population levels, age structure and reproduction.
2. To determine the food habits of the coyote as they relate to the distribution and abundance of major food species and the principal ecological inter-relationships of the coyote and other predators in Adirondack Park.
3. To assess the probable relationships and interactions of eastern coyotes and potentially reintroduced wolves in Adirondack Park.

### Study Sites

Following a few months of preliminary field work, one primary and three or four secondary study areas will be selected. The primary area will encompass about 500 square miles and possess significant populations of eastern coyotes, white-tailed deer and snowshoe hares. The primary area will be used to assess population characteristics of the coyote, as well as its ecological relationships with other species. The secondary study areas will provide collection sites for food habits data and some information on coyote populations. One





of these study sites will be located in the northern Tug Hill area, adjacent to Adirondack Park but within the Adirondack region as a whole. The Tug Hill area has a relatively dense coyote population.

Study sites will be selected on the basis of preliminary field surveys and discussions with N.Y.S. Dept. of Environmental Conservation personnel, as well as with local residents and land-owners.

Coyote populations will be monitored using permanent census routes established on study areas. Siren surveys to elicit coyote howl responses as described and evaluated by Wolfe (1974) will be conducted in September and October, and again in January and February; siren survey routes will be approximately 30 miles long and located on year-round roads. Scent-post surveys as described by Carley (1973) will be conducted during September and October; where feasible, the scent-post routes will coincide with the areas being sampled by siren surveys. Use of scent-post sites by coyotes will be recorded. Snow track counts will be conducted as conditions warrant from November through March; track count routes will include the siren survey and scent-post routes, but will sample additional, more remote routes. Tracks of coyote, fox, dog, deer and snowshoe hare will be recorded on track count routes. Track counts will provide indices of abundance. By integrating these indices with each other and home range data available from other studies, coyote population densities will be estimated.

#### Population Age Structure

Carcasses of coyotes will be solicited from trappers throughout the Adirondacks, but especially on and in the vicinity of the study areas. Teeth will be extracted, sectioned and stained to determine age of the individual (Linhart and Knowlton 1967). The first premolar will be extracted from each coyote captured to determine its age. Reproductive tracts from female coyote carcasses will be used to assess reproductive performance from placental scar counts.

#### Food Habits

Coyote droppings will be collected regularly from designated roads, trails and sites to provide a seasonal analysis of food habits, according to the following schedule: May 1 to 10 (or as snow melt permits), July 20 to 31, October 15 to 25 and December 5 to 15. Other scats will be collected as encountered and assigned to one of the collection periods. Stomachs will be collected from carcasses obtained for age and reproductive evaluation.

Scat and stomach contents will be determined by standard food habits procedures and the results stratified by the periods of collection noted above. Analysis will specifically include separation of summer and winter pelages of deer and hare (and other species) and assessment of age of any deer hoof fragments into the



following categories: Embryo, 0 to 1 mo. fawn, 1 to 4 mo. fawn, 4 to 8 mo. fawn and 8 to 12 mo. fawn. Adjustment of older fawn categories may be made as experience is gained.

### Predation and Prey Population Characteristics

Winter deer concentration areas will be located primarily from existing files and maps (New York State Dept. of Environmental Conservation). These locations will be verified by aerial and ground surveys. Number of wintering deer and carrion availability will be assessed by transects and track counts. Every attempt will be made to ascertain the frequency with which coyotes obtain deer as prey or carrion. The value of deer as coyote prey (and potential wolf prey) will be assessed using models (and appropriate conversions of available meat in kg/sq. kilometer, etc.). Similar procedures will be used for the snowshoe hare and beaver. The apparent failure of coyotes to prey on beaver, an important food resource of wolves, is noteworthy from the standpoint of coyote-wolf competition for prey.

Sub-project II: Assessment of biological, ecological and sociological factors in the reintroduction of the timber wolf in Adirondack Park.

The objectives of this sub-project are:

1. To appraise the quality and extent of potential wolf range in Adirondack Park.
2. To assess the adequacy of the potential food supply for wolves in Adirondack Park.
3. To determine from existing information in the literature and from research conducted in this project (including Sub-project I) how potentially reintroduced wolves might affect and interact with other predators and wildlife species in Adirondack Park.
4. To integrate all biological, ecological and sociological information (the latter from another sub-project) as a basis to make recommendations concerning reintroduction of the timber wolf in Adirondack Park.

To meet the first objective, a map of Adirondack Park and the immediate periphery will be prepared delineating major vegetational components and areas of human activity and settlement. Information on vegetation (i.e., conifer, mixed forest, deciduous forest, etc.) will be derived from aerial photos. The extent of human settlement development and activity will be mapped using LUNR coverage (available from Cornell University) and map overlays prepared by the Adirondack Park Agency.



The bulk of information about the potential food supply for wolves in Adirondack Park will be obtained from Sub-project I. Additionally, we shall conduct a thorough review of published data on wolf predation and ecology and consult with investigators who have studied this species.

We propose to develop computer models simulating wolf predation and its interactions with selected predators such as the coyote in the Adirondacks. These models will be similar to those developed by Harvey (1975) and White and Pierce (1975) for the puma.

Data from other projects within the Adirondack Wilderness Fauna Program, e.g. "Historical Perspectives on Fish and Wildlife Ecology in the Adirondacks," and "Attitudes of Adirondack Residents and Recreationists Toward Reintroduction of Native Fauna," as well as information from the literature, from this project (particularly Sub-project I), from the model and from consultations and discussions will be integrated to form the basis for recommendations concerning reintroduction. These recommendations will take into account wolf ecology, food and space requirements, interactions with other species, potential conflicts with park residents and visitors and the possible influence of wolves on deer hunting. If reintroduction of the timber wolf in Adirondack Park appears to be feasible, potential release sites and reintroduction procedures and/or possible further study will be recommended.





## PERSONNEL

Dr. Robert E. Chambers will be principal investigator for both sub-projects, with primary responsibility for Sub-project II. Mr. Peter Gaskin, co-principal investigator and Ph.D. candidate will have primary responsibility for Sub-project I. Mr. Gaskin will take sabbatical leave from his present position to complete the sub-project. One graduate research assistant (M.S. candidate to be selected) will be assigned to work on Sub-project I. Part-time technical assistance will be provided by students for laboratory work, tooth sectioning, gathering food habits and reproductive data, routine track surveys, etc.

## FACILITIES

Headquarters for field operations will be the Adirondack Ecological Center, S.U.N.Y. College of Environmental Science and Forestry, Newcomb Campus at Newcomb, New York. This facility, centrally located in Adirondack Park, will provide laboratory and office space, as well as a facilities for snowmobile maintenance, etc.

Library facilities are available at the Adirondack Ecological Center, Moon Memorial Library (main Syracuse Campus of the College of Environmental Science and Forestry), and Byrd Library, Syracuse University. Maps will be prepared with the aid of the photogrammetry laboratory of the College. Some cartographic information will be obtained from the Adirondack Park Agency.

## BUDGET SUMMARIES

Budget summaries for Sub-projects I and II are given in Tables 1 and 2.



Table 1. Budget Summary for Sub-Project I.

Budget Item	First Year	Second Year	Third Year	Total
<u>Salaries and Wages</u>				
Salary of principal investigator, R.E. Chambers at 5% contributed by SUNY	-	-	-	-
Total	-	-	-	-
<u>Equipment, Supplies and Publication</u>				
Electronic police siren, 12 volt Sir W. Magnum external speaker	370	-	-	370
Snowmobile and double trailer, 80% assignment to this sub-project	1,520	-	-	1,520
Spotting scope and tripod	180	-	-	180
Aerial photos and maps	500	100	-	600
Miscellaneous tools and supplies	200	150	100	450
Publication, including journal page charges and secretarial services	-	200	600	800
Total	2,770	450	700	3,920
<u>Student Stipends, Consulting, Technical Service</u>				
Graduate Assistantship, Ph.D. Candidate, Mr. Peter Gaskin	3,600	3,600	3,600	10,800
Technical Assistance, part-time students	3,000	3,000	3,000	9,000
Airplane flight time at \$30/hour	400	400	600	1,400
Professional consultant	300	800	-	1,100
Total	7,300	7,800	7,200	22,300
<u>Travel</u>				
Gas, oil, snowmobile maintenance	600	600	600	1,800
Auto mileage at 15¢/mile, 6,000 miles	900	900	900	2,700
Total	1,500	1,500	1,500	4,500
Total Direct Costs	11,570	9,750	9,400	30,720
Indirect Costs	None	None	None	None
Total Costs	11,570	9,750	9,400	30,720



Table 2. Budget Summary for Sub-Project II.

Budget Item	First Year	Second Year	Third Year	Total
<u>Salaries and Wages</u>				
Salary of principal investigator, R.E. Chambers at 10%, contributed by SUNY	-	-	-	-
Total	-	-	-	-
<u>Equipment, Supplies and Publication</u>				
Snowmobile and double trailer, 20% assignment to this sub-project	380	-	-	380
Aerial photos and maps	200	100	-	300
Miscellaneous tools and supplies	100	50	-	150
Publication, including journal page charges and secretarial services	-	200	400	600
Total	680	350	400	1,430
<u>Student Stipends, Consulting, Technical Service</u>				
Graduate Assistant, M.S. candidate to be determined	3,600	3,600	3,600	10,800
Technical assistance, part-time students	1,000	1,000	1,000	3,000
Airplane flight time at \$30/hour	800	800	-	1,600
Computer time	-	800	400	1,200
Total	5,400	6,200	5,000	16,600
<u>Travel</u>				
Gas, oil, snowmobile maintenance	150	150	150	450
Auto mileage at 15¢/mile 3,000 miles	450	450	450	1,350
Total	600	600	600	1,800
Total Direct Costs	6,680	7,150	6,000	19,830
Indirect Costs	None	None	None	None
Total Costs	6,680	7,150	6,000	19,830



## CURRICULUM VITAE

Robert E. Chambers  
Associate Professor  
Dept. of Forest Zoology  
S.U.N.Y. College of  
Environmental Science  
and Forestry  
Syracuse, New York 13210

Education

B.S.	Zoology	Penna. State University	1954
M.S.	Wildlife Management	Penna. State University	1956
Ph.D.	Zoology	Ohio State University	1972

Employment

1967-Present	Assistant Professor to Associate Professor, Department of Forest Zoology, S.U.N.Y. College of Environmental Science and Forestry
1965	Lab Technician, Ohio State University Hospital
1962-1964	Project Leader, Ohio Dept. Natural Resources
1960-1962	Research Assistant, Penrose Research Lab
1959-1960	Assistant Chief, Game Division, W. Va. Dept. Natural Resources
1956-1959	Project Leader, W. Va. Dept. Natural Resources

Fields of Specialization

Population ecology of mammals and birds  
Relationship of populations to habitat characteristics

Research Activities

1970-1973	Woodcock Management Research - \$55,000 from U.S. Fish and Wildlife Service via contract with N.Y.S. Dept. of Environmental Conservation
1972-1975	Woodcock Nesting Ecology - \$11,400 from U.S. Fish and Wildlife Service via contract with N.Y.S. Dept. of Environmental Conservation
1973	Ecology of the Eastern Coyote - \$7,200 contract with N.Y.S. Dept. of Environmental Conservation
1972	Effect of Dylox on Birds and Mammals - \$3,500 contract with U.S. Forest Service via AFRI
1972-Present	Currently Un-sponsored - Ecology of Ruffed Grouse, Management of Wilderness Species in the Adiron- dacks; Spruce Grouse and Wild Canids

Graduate Student Research Theses and Publications

1970	Richard Colesante	M.S.	Factors Influencing Fertility, Hatchability and Check Vigor in Bobwhite Quail
1971	David Janes	M.S.	The Behavior and Ecology of the Great Blue Heron





1972	Richard Beyer	M.S.	Hematological Characteristics of the American Woodcock
1974	Andrew Clauson	M.S.	Nesting and Broodrearing Ecology and Behavior of the American Woodcock in Central New York
1974	Joann Frier	M.S.	The Social Behavior of a Group of Female Macaques <i>Macaca fascicularis</i> and the Effects of Reintroduction of Males
1975	James Woehr	M.S.	Winter and Spring Shelter and Food Selection by Ruffed Grouse in Central New York
	Roger Post	M.S.	Movements and Food Habits of Coyotes (Final Draft Stage)
	John O'Pezio		An Evaluation of White-tailed Deer Fawn Mortality in the Seneca Army Depot. Trans. 30th Northeast Fish and Wildl. Conf. p. 345-361.
	Mark Traceski		Woodcock Nesting Ecology
	Douglas Cerretani		Winter Ecology of Ruffed Grouse

Assisted in development and currently Program Director of graduate program in Fish and Wildlife Managerial Science.

#### Professional Societies and Activities

Member, AAAS, The Wildlife Society, Animal Behavior Society and Sigma Xi.

Vice President, N.Y. Chapter, The Wildlife Society  
 Secretary-Treasurer, Northeast Section, The Wildlife Society  
 Northeast Representative to Council of The Wildlife Society

Refereed 5 papers for The Journal of Wildlife Management  
 Edited 6 papers for the 1974 Transactions of the Northeast Fish and Wildlife Conference  
 Assisted editor with publication of the 1971 and 1973 Transactions of the Northeast Fish and Wildlife Conference  
 College Undergraduate Academic Affairs Committee - 1972 and 1973  
 School Committee on Summer Camp

#### List of Publications

- 1958 With P.F. English. Modifications of ruffed grouse traps. J. Wildl. Manage. 22(2):200-202.
- 1958 With W.M. Sharp. Movement and dispersal within a population of ruffed grouse. J. Wildl. Manage. 22(3):231-239.
- 1959 With A.R. Stickley. Use of the syringe gun to anesthetize black bears. Trans. 16th Northeast Fish and Wildlife Conference.
- 1971 Status of non-game wildlife programs; our responsibility. Trans. 28th Northeast Fish and Wildlife Conference. 1-7.
- 1972 Effects of Dylow on mammals and birds. In Environmental Impact and Efficacy of Dylox Used for Gypsy Moth Control in New York State. AFRI Research Report No. 10. 43-58.



- 1974 Peterle, T.J., S.I. Lustick, L.E. Nauman and R.E. Chambers. Some physiological effects of dietary DDT on mallard, bobwhite quail and domestic rabbits. XI International Congress of Game Biologists. Stockholm, Sweden. 457-478.
- 1975 Woehr, J.R. and R.E. Chambers. Winter and spring food preferences of ruffed grouse in central New York. Trans. 32nd Northeast Fish and Wildlife Conference, New Haven, Connecticut. (in press).
- 1975 Post, R.A., R.E. Chambers and P.N. Gaskin. Movements and home ranges of coyotes in New York: preliminary observations. Trans. 32nd Northeast Fish and Wildlife Conference, New Haven, Connecticut. (in press).



## CURRICULUM VITAE

Peter N. Gaskin  
Associate Professor  
Jefferson Community College  
Watertown, New York 13601

Education

B.S.	Biology	St. Lawrence University	1961
M.S.	Biology	State University of New York at Potsdam	1968

Employment

1965-Present     Associate Professor of Biology at Jefferson Community College

Fields of Specialization

Ecology of wild canids

Professional and Research Activities

1961-65	Secondary Biology and Chemistry teacher at Watertown High School
1962-65	National Science Foundation at Pigeon Lake Biological Station, Drummond, Wisconsin (Summers 1962-65)
1965-69	Lecturer Conservation Field Day sponsored by Jefferson County Co-operative Extension
1966	Guest Lecturer, Ecology course for Elementary teachers at Association Island; SUNY at Oswego (Summer)
1967	Guest Lecturer, Dr. Paul Hafferis, Field Biology course (Topic - Bogs) SUNY at Potsdam
1967	Study of Freshwater Diatoms in clay sediments of Perch Lake Bog - Diatoms were identified and photographed with an electron microscope (Spring 1967)
1969	Pollen Analysis of Perch Lake Bog (Spring 1969)
1969	Began collecting specimens and studying the Ecology and Taxonomic Characteristics of the Wild Canid of New York State
1969	Consultant to and Member of 4-H Executive Committee - (Development of Nature-Study Programs at 4-H Camp, Millsite Lake)
1970	Biological Studies and Mapping of Fourteen Lakes of Jefferson County, New York (Spring 1970)
1970	Consultant to Watertown School District concerning the development and planning of Elementary School nature area
1971	Faculty-Clarkson College of Technology, 8-week Summer Course, Pollution and Environmental Ecology N.Y.S. Institute for Two-Year College Teachers
1975	Coyote Workshop - Northeast Fish and Wildlife Conference, February; Presented paper entitled, "A Multivariate Analysis of Skull Characteristics of New York Coyotes."





Professional Affiliations

Wildlife Society

American Institute of Biological Sciences

New York State Chapter of Wildlife Society

International Association for Great Lakes Research

Publications

- 1971 Gaskin, P. and Fenlon, M. Laboratory Manual for  
General Biology.
- 1973 Gaskin, P. "The Coyote: A Newly Substantiated Member  
of New York's Wildlife Community," SAID, Vol. 11.  
A publication of the Faculty, Jefferson Community  
College.
- 1974 Chambers, Robert E., Gaskin, Peter N., Post, Roger A.,  
Cameron, Stuart A. The Conservationist, Oct.-Nov.



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- Parrow, L. 1973. A report on stomach contents of New York coyotes. Term paper. S.U.N.Y. Coll. Env. Sci. Forestry, Syracuse, N.Y. 22 pp.
- Pimlott, D.H., J.A. Shannon and G.B. Kolenosky. 1969. The ecology of the timber wolf in Algonquin Park. *Ontar. Dept. Lands and For. Res. Rep. (Wildlife).* 87:94 pp.



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THE ADIRONDACK WILDERNESS FAUNA PROGRAM  
A PROPOSAL FOR A COMPREHENSIVE RESEARCH EFFORT

Submitted by

The Research Foundation of State University of New York

Cooperating Institutions:

State University of New York, College of  
Environmental Science and Forestry  
Cornell University  
Jefferson Community College  
St. Lawrence University  
Adirondack Museum  
Adirondack Park Agency  
New York State Department of Environmental  
Conservation  
Private Consultants

Program

Coordinator: Rainer H. Brocke, Ph.D.  
Adirondack Ecological Center  
S.U.N.Y. College of Environmental  
Science and Forestry  
Newcomb Campus  
Newcomb, New York 12852  
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## OVERVIEW

The Adirondack Wilderness Fauna Program includes fifteen studies of which eight are concerned with the feasibility of reintroducing five native species including the peregrine falcon, timber wolf, lynx, puma and moose. Additionally, five studies will determine the ecological status of unusual native fauna which may possibly be threatened, namely the loon, raven, spruce grouse, goshawk and yellow-nose vole. Two studies of a more general nature will contribute information to other projects. One is concerned with the attitudes of people toward the reintroduction of native fauna and the other on historical perspectives in fish and wildlife ecology in the Adirondacks.

It should be emphasized that the program is a unified effort even though each project is to a large extent operationally discrete. Technical information will be shared among scientists through frequent personal communications, memos, newsletters and at least one annual meeting. Scientists from the State University of New York College of Environmental Science and Forestry, Cornell University, St. Lawrence University, Jefferson Community College, the Adirondack Museum and consulting companies will be primarily responsible for research. Cartographic information for the Adirondack region will be available from the Adirondack Park Agency. The program has been conceived in close cooperation with the Division of Fish and Wildlife, New York State Department of Environmental Conservation. As the program matures and objectives of individual research projects are met, emphasis will shift to implementation (reintroduction and/or management) and the role of the Department of Conservation will enlarge accordingly.

The history of wildlife introduction or reintroduction into Adirondack Park is chequered. During the last century, when the region was a playground for the wealthy, there were many unsuccessful attempts by owners of large estates to introduce exotic species such as the European black grouse, capercaillie, various pheasants and the wild boar. The wapiti, which was native to the periphery of the Park, was also tried without success. The first successful attempt was the reintroduction of the beaver at the turn of the century by the New York State Forest, Fish and Game Commission. The beaver had been practically extirpated from the region, but within twenty years, 40 stocked beaver had multiplied to 10,000 individuals.

An expected dimension of the proposed program is a degree of controversy in public opinion concerning particular projects. For example, research efforts leading to the reintroduction of the timber wolf and puma may be met with disapproval in some quarters, particularly because the Adirondack region has been a favored hunting ground for deer. On the other hand, public opinion and political pressure may be strong in favor of unqualified moose reintroduction, a prospect which is unpalatable to biologists (see project proposal on, "The role of the brainworm in the coexistence ecology of the moose and the white-tailed deer"). For these reasons, a continuous effort will be made to inform the public through news releases, articles and lectures about the objectives and accomplishments of the program. In this way, we hope that the public will be well-informed about the program when the time comes for objective decisions about reintroduction and/or management.



## LIST OF PROJECTS

<u>Page</u>	<u>Project</u>	<u>Principal Investigator</u>
6.	Reintroduction and management of the peregrine falcon in Adirondack Park.	Dr. Tom Cade Professor Department of Natural Resources Cornell University Ithaca, New York 14850
24.	Reintroduction of the timber wolf in Adirondack Park: Phase I - Feasibility Studies.	Dr. Robert E. Chambers Associate Professor S.U.N.Y. College of Environmental Science and Forestry Syracuse, New York 13210
26.	<u>Sub-project I</u> : The potential interactions of the eastern coyote <i>Canis latrans</i> var. and the timber wolf <i>Canis lupus</i> <i>lynx</i> in Adirondack Park.	and Mr. Peter N. Gaskin Associate Professor Jefferson Community College Watertown, New York
27.	<u>Sub-project II</u> : Assessment of biological, ecological and sociological factors in the reintroduction of the timber wolf in Adirondack Park.	
43.	Reintroduction of the lynx and puma in Adirondack Park: Phase I - Feasibility Studies.	Dr. Rainer H. Brocke Senior Research Associate Adirondack Ecological Center S.U.N.Y. College of Environmental Science and Forestry Newcomb, New York 12852
45.	<u>Sub-project I</u> : The status of the eastern puma <i>Felis concolor</i> <i>cougar</i> in north-eastern North America.	and Dr. Dietland Müller-Schwarze Associate Professor Department of Forest Zoology S.U.N.Y. College of Environmental Science and Forestry Syracuse, New York 13210
47.	<u>Sub-project II</u> : The ecology, habitat and range of the bobcat <i>Lynx rufus rufus</i> and its potential interactions with reintroduced <i>Lynx</i> <i>Lynx canadensis canadensis</i> in Adirondack Park - a field study.	
48.	<u>Sub-project III</u> : Social and sexual communication in the bobcat <i>Lynx rufus rufus</i> , the lynx <i>Lynx canadensis canadensis</i> and the puma <i>Felis concolor</i> sp. an experimental study.	
49.	<u>Sub-project IV</u> : Assessment of biological, ecological and sociological factors in the reintroduction of the lynx <i>Lynx canadensis canadensis</i> and the puma <i>Felis concolor</i> sp. in Adirondack Park.	



<u>Page</u>	<u>Project</u>	<u>Principal Investigator</u>
65.	The role of the brainworm in the coexistence ecology of the moose and the white-tailed deer.	Dr. Donald F. Behrend Senior Research Associate S.U.N.Y. College of Environmental Science and Forestry Syracuse, New York 13210 and Dr. George F. Mattfeld Research Associate Adirondack Ecological Center S.U.N.Y. College of Environmental Science and Forestry Newcomb, New York 12852
82.	Ecological status of the yellow-nose vole <i>Microtus chrotorhinus</i> in Adirondack Park.	Dr. Kenneth Crowell Associate Professor Department of Biology St. Lawrence University Canton, New York 13617
92.	Ecological status and management of the loon in Adirondack Park.	Dr. Anne LaBastille Ecological Consultant West of the Wind Publications Big Moose, New York 13307
102.	Ecological status of the raven in Adirondack Park.	Dr. Larry VanDruff Assistant Professor Department of Forest Zoology S.U.N.Y. College of Environmental Science and Forestry Syracuse, New York 13210
111.	Ecological status of the spruce grouse in Adirondack Park.	Dr. Robert Chambers Associate Professor Department of Forest Zoology S.U.N.Y. College of Environmental Science and Forestry Syracuse, New York 13210
123.	Ecological status of the goshawk in Adirondack Park.	Mr. William Tierson Director Adirondack Ecological Center S.U.N.Y. College of Environmental Science and Forestry Newcomb, New York 12852
130.	Historical perspectives on fish and wildlife ecology in the Adirondacks.	Mr. William K. Verner Curator Adirondack Museum Blue Mountain Lake, New York 12





<u>Page</u>	<u>Project</u>	<u>Principal Investigator</u>
137.	Attitudes of Adirondack residents and recreationists toward reintroduction of native fauna.	Dr. Gene R. Reetz Assistant Professor and Mr. Tommy L. Brown Research Associate Department of Natural Resources Cornell University Ithaca, New York 14850



Research Proposal

ATTITUDES OF ADIRONDACK RESIDENTS AND RECREATIONISTS  
TOWARD REINTRODUCTION OF NATIVE FAUNA

A Project of  
THE ADIRONDACK WILDERNESS FAUNA PROGRAM

Principal Investigator  
and Institution:

Dr. Gene R. Reetz  
Assistant Professor

and

Mr. Tommy L. Brown  
Research Associate  
Dept. of Natural Resources  
Cornell University  
Ithaca, New York 14850

Project Duration: 1 year

Project Direct Costs: \$22,710

Program Coordinator: Dr. Rainer H. Brocke  
Adirondack Ecological Center  
S.U.N.Y. College of Environmental  
Science and Forestry  
Newcomb, New York 12852  
(Phone 518 582-4551)



## ABSTRACT

Concurrent with the demonstrated desire of millions of Americans to set aside or restore wilderness areas throughout the United States, New York State has developed a land use plan for the Adirondacks that includes "wilderness" designation for several multi-thousand acre tracts. Many conservationists feel that these wilderness tracts should be restored as nearly as possible to reflect pre-settlement flora and fauna ecosystems. Such a management plan would require, if biologically feasible, reintroduction of moose and carnivorous mammals, and modification of the current policy of absolute fire suppression. An important input into the feasibility of this project is the determination of degree of support of the public in general, and Adirondack residents and recreationists in particular for the program, and perceptions of how these groups would be affected by faunal reintroductions. This study would determine initial reactions and concerns of Adirondack landowners, residents, recreationists.



## BACKGROUND

As decades have passed and man has been increasingly influenced by technology, he has simultaneously developed a strong appreciation for natural systems and a desire to preserve samples of those systems that once encompassed the North American continent (U.S. Forest Service, 1970). Man now realizes that natural systems not only provide aesthetic environments for his recreation and contemplation, but that they are also ecologically linked with his own environment and physical well-being. A culmination of this concern for wilderness preservation was the passage of the Wilderness Act of 1964 (P.L. 88-577), which made provision for reclassification of National Forest and National Park primitive areas into designated wilderness areas.

While passage of the Wilderness Act of 1964 assured preservation of millions of acres of wild lands, two problems remained. First, criteria for inclusion of areas into the Wilderness Act were so strict that few eastern areas had any chance of inclusion into the system. Secondly, regardless of political-legal designation, literally every acre in the east (if not the continent) has been affected by the presence of technological man, as exhibited by such symptoms as acid rain, DDT residues, and loss of flora and fauna species that were once native. Some of these species are now extinct and others are endangered, but many still inhabit other areas of North America.

New York State has shown great interest in maintaining one of the largest semi-wilderness areas in the eastern United States--the Adirondack area. The State Forest Preserve was established in 1885 with the Constitutional mandate that these lands were to be kept "forever wild." The State has created the Adirondack Park Agency and charged it with developing and implementing a land use plan that gives wilderness designation to several multi-thousand acre tracts, and places high priority on wilderness values (Adirondack Park Agency, 1973). Now that the wilderness areas have been legally defined, conservationists are eager to attempt restoration of the diverse biota that once inhabited the park. In determining the feasibility of reintroducing these biota on a species by species basis, scientists must determine not only the biological feasibility, but also the possible impact of humans on reintroduced species. Adirondack Park is perhaps unique in North America in that its wilderness areas are closely juxtaposed with permanent human settlements scattered throughout the park. On the other hand, we must also know the potential adverse effects of reintroduced species, both fancied and real. Reintroduction of wildlife species such as the puma and the wolf and the possible relaxation of fire suppression policies may create considerable unease among local residents.





The importance of accompanying a reintroduction program with education, and providing opportunities for feedback of affected groups is well established (Hendee, 1974). As initiation of the project is contemplated, information is simultaneously needed on the degree of public support, and concerns of residents, land-owners, and recreationists. Such information is particularly important to this project because the eastern population is not generally familiar with wilderness management techniques. Research has shown that once western populations have become familiar with such techniques as limited fire suppression, they have generally approved of them (Lucas, 1974).

### OBJECTIVES, PROCEDURES AND METHODS

The objectives of the proposed survey are:

1. To obtain indications of public opinion and reaction; pro and con, to the potential reintroduction of wildlife species such as the puma, lynx, wolf and moose.
2. To obtain indications of how the public views the Adirondack wildlife resource and how this resource should contribute to their lives.
3. To obtain indications of how the public views management of wilderness wildlife in general and how it envisions management of Adirondack wildlife in particular (including reactions to limited fire suppression).

Samples of rural landowners, hunters, hikers, fishermen, park visitors and non-park users will be surveyed by mail for reasons of economy. Approximately 200 landowners in each of ten representative townships surrounding State lands will be contacted. Samples will draw on Cooperative Extension, A.S.C.S. and other lists of landowners to assure that 25 percent of the landowners are farmers or derive economic values from the land. The remaining 75 percent of the sample will be systematically drawn from tax rolls. Surveys of 400 hunters, 400 fishermen and 400 park visitors will be made using lists of license purchasers, membership rolls of hiking clubs, hiker registrations at trail-heads and lists of State campground users. In addition, a random sample of 400 citizens from a representative urban-suburban area will be surveyed by mail to obtain opinions of non-park users.

Data will be analyzed to determine resource management versus non-management interests, resident versus absentee landowner opinions, landowner-recreationist attitudes concerning wildlife reintroduction, attitudes toward the Adirondack wildlife resource in general and its management, etc. Data analysis and interpretations will be in a form which can be readily and



rapidly implemented in later stages of the Adirondack Wilderness Fauna Program.

#### PERSONNEL AND FACILITIES

Principal investigators are Dr. Gene R. Reetz, Assistant Professor, Dept. of Natural Resources, Cornell University and Mr. Tommy L. Brown, Research Associate in the same department. Technical assistant will be provided by Mr. Daniel Miller, Research Technician of the Dept. of Natural Resources, Cornell University.

The study headquarters will be in Fernow Hall, Cornell University, Ithaca, New York.



## BUDGET SUMMARY

Budget Item	Amount
<u>Salaries and Wages</u>	
Salary of G.R. Reetz at 5% contributed by Cornell University	-
Salary of T.L. Brown (3 months)	3,600
Salary of D. Miller (9 months)	9,200
Fringe Benefits at 20% of salaries	2,560
Total	15,360
<u>Supplies, Services and Publication</u>	
Supplies, paper, postage, etc.	5,000
Secretarial services	600
Publishing costs including page charges	450
Computer rental	700
Total	6,750
<u>Travel</u>	
Auto mileage to Adirondacks, board and lodging	600
Total	600
Direct Costs	22,710
Indirect Costs <sup>1</sup>	-----
Total Costs	-----

<sup>1</sup>Cornell University's indirect cost rate is 53.4 percent of salaries and wages. Lesser rates are often accepted for funding agencies who have a maximum allocated rate. Indirect costs are typically waived for state agencies.





## CURRICULUM VITAE

Gene R. Reetz  
Assistant Professor  
Dept. of Natural Resources  
Cornell University  
Ithaca, New York 14853

### Education

B.S.	Colorado State University	1964
M.S.	University of Arizona	1969
Ph.D.	Cornell University	1974

### Employment

1975	Assistant Professor, Dept. of Natural Resources, Cornell University. Responsibility for teaching, research and extension in outdoor recreation. Research activities include examining recreational use of the Hudson River Gorge and users' perceptions, environmental analysis of the Gorge, investigation of winter recreation conflicts.
1973-1974	Instructor, Dept. of Natural Resources, Cornell University.
1971-1972	Research Assistant, Cornell University.
1969-1971	Assistant Hydraulic Engineer. N.Y.S. Dept. of Environmental Conservation, Division of Water Resources. Chairman of a Task Force to develop a comprehensive, multiple purpose water resource plan for the Chemung River Basin.
1965-1969	Research Assistant, Water Resources Institute, University of Arizona.
1960-1964	(Summers) Engineering Aide, Denver Board of Water Commissioners.

### Professional Affiliations and Service

National Recreation and Parks Association  
Association of American Geographers  
American Association for the Advancement of Science  
Advisor, Cornell Conservation Club  
Preserve Manager, Central New York Nature Conservancy



## CURRICULUM VITAE

Tommy L. Brown  
 Research Associate  
 Department of Natural Resources  
 Cornell University  
 Ithaca, New York 14850

Education

Initial undergraduate work at the University of Kentucky, Lexington.

- B.S. Recreation and Parks Administration, University of Minnesota, Minneapolis.
- M.S. Forestry, University of Minnesota, St. Paul, with field of concentration in outdoor recreation and social research methods. M.S. thesis: "A Study of Twin Cities Users of Three Minnesota State Parks and Two Minneapolis-St. Paul Municipal Parks." Postgraduate work at Cornell University.

Employment

- 1970 to Present Research Associate, Cornell University  
 Dept. of Natural Resources, Ithaca, N.Y.  
 Working in outdoor recreation research.
- 1968-1969 Research assistant in outdoor recreation,  
 University of Minnesota School of Forestry.

Honors and Organizations

B.S. "With Distinction."

Member, People/Natural Resources Research Council

List of Publications

- 1970 \_\_\_\_\_ and L.C. Merriam Jr. Twin Cities camper and the State Park environment, Minnesota Forestry Research Notes, No. 215. University of Minnesota School of Forestry, St. Paul. 4 pp.
- 1972 \_\_\_\_\_ and B.T. Wilkins. A study of campground businesses in New York State. Cornell University Dept. of Natural Resources, Research Series No. 2. Ithaca, New York. 22 pp.
- 1972 \_\_\_\_\_ and B.T. Wilkins. To add income: higher fees or more sites?", Campground and RV Park Management, III:7 (Sept. 1972). Grass Valley, Cal. pp. 1, 10.
- 1973 Bond, R. and T.L. Brown. Public campground pricing policies and practices in the Northeast. University of Massachusetts Agric. Exper. Station Bull. 601. Amherst, Mass. 44 pp.



List of Publications continued

- 1973 Wilkins, B.T. and T.L. Brown. New owners and views of natural resources in rural America. Transactions of the Thirty-eighth North American Wildlife and Natural Resources Conference. Washington, D.C., March 1973. Pp. 405-413.
- 1973 Merriam, L.C. Jr., T.L. Brown et al. The camper in Minnesota State Parks and Forests. Some insights on use and management from a five-year study. University of Minnesota Agric. Exper. Station Bull. 510. 19 pp.
- 1973 \_\_\_\_\_. Posting of private lands in New York: incidences and causes. Conservation Circular. Cornell University Dept. of Natural Resources, Vol. 11, No. 4. 8 pp.
- 1974 \_\_\_\_\_ and G.A. Hill. The New York snowmobiler and the private landowner. Proceedings, 1973 Snowmobile and Off the Road Vehicle Symposium. Michigan State University. 10 pp.
- 1974 New York Landowners' attitudes toward recreation activities. Transactions of the Thirty-ninth North American Wildlife and Natural Resources Conference. Denver, Colorado, April 1974. Pp. 173-180.

## LITERATURE CITED

- Adirondack Park Agency. 1973. Adirondack Park Land Use and Development Plan and Recommendations for Implementation. Adirondack Park Agency, Ray Brook, N.Y. 35 pp.
- Hendee, John C. 1974. A Scientist's Views on Some Current Wilderness Management Issues. Western Wildlands, Spring '74, pp. 27-32.
- Lucas, Robert C. 1974. Forest Service Wilderness Research in the Rockies: What We've Learned So Far. Western Wildlands, Spring '74, pp. 5-12.
- U.S. Forest Service. 1970. Search for Solitude. U.S. Government Printing Office, Washington, D.C. 33 pp.



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

Chippewa National Forest  
Cass Lake, MN 56633

2600

February 23, 1976



Mr. Ralph E. Bailey  
Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, MI 49855

Dear Mr. Bailey:

Thank you for the opportunity to respond to the draft Recovery Plan for the Eastern Timber Wolf. We offer the following comments and suggestions:

Classification

Although this is a very controversial and politically sensitive subject we do not see how the wolf can be classified differently from one place to another. The animal is either endangered (or threatened) or it is not. It cannot be both.

If we apply this dual designation to other species, we will end up with a huge and meaningless listing. For instance, the sandhill crane could easily be classified as "endangered" in Minnesota, yet it does not require classification in other parts of its range.

If the gene pool of a particular organism is indeed in danger of elimination from the face of the earth, then it should be classified as endangered. The decision should not be affected by State boundaries or other socio/political considerations.

Unfortunately, the Act does not provide specific criteria for making the determination of endangered or threatened. It says only that: "endangered is any animal in danger of extinction within all or a significant portion of its range".

If the eastern timber wolf has been reduced to only 3% of its original range, it would seem the endangered category is justified if original range is the criteria. If, however, the existing range is the criteria to determine classification, threatened may be the appropriate designation.





2.

### Proposed Wolf Densities

While it is worthwhile and appropriate to determine population goals for the various management zones, it should be made clear that it is exceedingly difficult to obtain this information.

It required years of highly intensive survey and study for Mech to assess the population in his 1,000 square mile study area. This expenditure of time and available money will probably not be available to monitor wolf populations throughout the entire wolf range in Minnesota.

### Promoting Prey Densities

Positive habitat management on public lands is called for. "Promoting" certain practices is a weak approach. Limiting human predation on wolves and their prey species should be a balancing act that will rarely require absolute prohibition against the taking of either. Closing the deer season for the purpose of wolf management when they reach low population levels stirred a hornet's nest. It seems such a recommendation could be left unsaid, since the legal harvest of deer would normally be closed long before they decline to 2.5 per square mile.

### Land Ownership in Management Zones

No analysis was made of land ownership in the various zones. This could be a very critical item for implementation of the plan. What are various land owner management objectives, especially in relation to compatibility with wolf recovery objectives? Positive control of access, human density and land use activity are needed.

### General Comments on Entire Plan

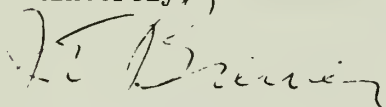
The recovery team should view their mission as one of detailing management needs for the timber wolf based on the hard facts of science and biology. The acceptance and implementation of the recommendations will ultimately be flavored by political considerations and the wishes of the American public. We have the feeling that the team has already been considerably influenced by political pressures and have perhaps "watered down" many of the recommendations in place of a straightforward statement of biological need.



3.

The plan seems incomplete with respect to the items relating to re-establishment of the wolf in its former range. Most of this effort is deferred to the future. We would like to see more specific treatment at this stage and in this document.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. E. Brewer". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

J. E. BREWER

Forest Supervisor





## NATIONAL AUDUBON SOCIETY

R.R. 4, RED WING, MINNESOTA 55066 (612) 388-2924

February 23, 1976

Mr. Ralph E. Bailey  
Eastern Timber Wolf  
Recovery Team  
P. O. Box 190  
Marquette, MI 49855

Dear Mr. Bailey:

The National Audubon Society wishes to compliment the Eastern Timber Wolf Recovery Team for its preparation of a well-reasoned Recovery Plan for this subspecies. We fully realize that any plan prepared for this controversial animal is likewise going to be controversial, the present draft of the plan certainly appears to be designed to bring about the recovery of an endangered species utilizing the best available scientific information while acknowledging current social, economic and political realities within which any plan must be implemented.

Audubon realizes that the time is past when letting the wolf be can accomplish anything positive for the wolf. We wish to emphasize National Audubon support of the following key elements of the Recovery Plan:

- 1) Establishment of two wolf sanctuaries
- 2) Timber management techniques, including controlled burning to insure optimum wolf habitat
- 3) Implementation of natural fire ecology for the Boundary Waters Canoe Area





Ralph E. Bailey  
February 23, 1976  
Page two

- 4) Variety of public education and information projects
- 5) Reestablishment of populations
- 6) Concept of caribou transplant
- 7) Regulation of harvest of prey species when population levels indicate a necessity for wolf recovery

After long and careful consideration of the implications of such action, we believe that classifying the Eastern timber wolf as "threatened" in the state of Minnesota only makes good sense. Such classification should be undertaken with the firm realization that it will be reviewed on a biennial basis.

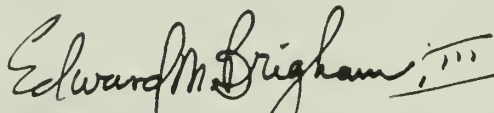
While any systematic destruction of predators is a practice basically repugnant to the National Audubon Society, we realize that there may exist certain specific instances of wolf depredation that may reasonably necessitate local control to remove the animal responsible for the damage.

We have no intention of nit-picking this Recovery Plan, even though a priority might be switched or an emphasis changed there. Instead we wish to affirm general support for the plan as presented by the Recovery Team in the document dated November, 1975.

National Audubon appreciates the opportunity to comment and stands ready to assist in the implementation of the Recovery Plan in any ways at its disposal.

Sincerely,

NATIONAL AUDUBON SOCIETY

A handwritten signature in dark ink, reading "Edward M. Brigham, III". The signature is written in a cursive style with a prominent "E" and "B".

Edward M. Brigham, III  
North Midwest Representative

EMB:yc





MILWAUKEE PUBLIC MUSEUM

20 February 1976

Mr. Ralph Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Thank you for the copy of the Recovery Plan for the Eastern Timber Wolf and the invitation to comment upon it. Although I am a population ecologist, I must confess that I have had almost no experience with wolves. Nevertheless, I have read your recovery plan with interest and would like to make just a few comments regarding my general impressions.

Emotionally, I have long sided with the wolf and certainly would hate to see its further demise in the United States. Additionally, I strongly support efforts to encourage or even reintroduce it in all areas where feasible. On the other hand, we must keep in mind, as pointed out by Leroy Rutske, that wolves do indeed pose a real threat to many human activities and that reintroduction or over-protection in some livestock-raising areas could result in undue increase of local public hostility toward wolf management programs.

Few areas are large enough to support wolf populations without careful management, and any protective legislation should take this into consideration. Wolves and their real activities and requirements are rarely understood by an American public that grew up in a climate of greatly exaggerated fear of these animals. It appears to me that there are rather clearly demarcated lines between those who unreasonably demand total protection and those who equally unreasonably demand the opposite. Certainly, the only solution lies in an intensive effort to educate the public, combined with the development of sound management policies. The education must precede any attempts to reestablish the eastern timber wolf, and I am pleased to see the report's emphasis along these lines.

Hopefully, following careful study and public relations efforts, the timber wolf can be allowed to reestablish itself in several select, noncontiguous areas as has been recommended in the recovery plan. I wish you the best of luck in this attempt and offer my cooperation to whatever extent I can be of help.

Sincerely,

Merlin D. Tuttle  
Curator of Mammals

cjc



SPECIAL PROJECTS FOUNDATION  
BIG GAME CLUB  
505 PEAVEY BUILDING  
MINNEAPOLIS, MINNESOTA 55402

February 17, 1976

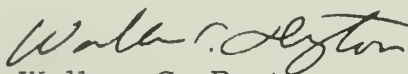
Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

You were kind to send me a copy of the Recovery Plan for the Eastern Timber Wolf. For sometime now the Special Projects Foundation of the Big Game Club has dedicated itself to raising money to support scientific studies on the graduate level of this fine animal. We believe it is vital that the ecology of the timber wolf be understood so that this animal may be managed, enabling its survival.

We are delighted to see that such a fine group of competent scientists have come up with a scientific management plan for the eastern timber wolf. Because this plan is scientifically based, following years of research by competent ecologists, it is only common sense to follow it and we hope it will be carried out. The uninformed, those whose emotions rather than reason rule, and those bowing to political pressures may urge other plans. Instead the Eastern Timber Wolf Recovery Plan should be based on the best scientific, research and hard knowledge available. Therefore, we commend the program presented by your Recovery Team.

Sincerely,

  
Wallace C. Dayton  
President



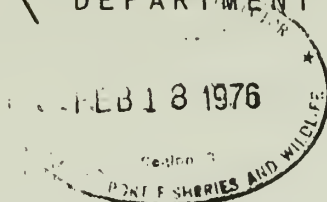


State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl  
Secretary

BOX 450  
MADISON, WISCONSIN 53701

February 10, 1976



IN REPLY REFER TO: 1520

Mr. Jack E. Hemphill, Regional Director  
U. S. Department of the Interior  
Fish and Wildlife Service  
Federal Building, Fort Snelling  
Twin Cities, Minnesota 55111

Dear Mr. Hemphill:

Below are our comments on the Eastern timber wolf recovery plan.

I apologize for the delay in our answer; however, it is our understanding that due to changes in your procedure, the deadline was extended to March 1, 1976.

The recovery plan is a thorough and well thought out document on a highly emotional and controversial subject.

If a state decides to pursue a wolf transplant, the steps are clearly laid out on how to proceed. Whether a state wants to proceed is another matter which cannot be controlled by the team.

It is our opinion that the plan should stand on its merits and not be changed except for minor editorial changes which are sure to be proposed.

Sincerely,

Anthony S. Earl  
Secretary





PURDUE UNIVERSITY  
DEPARTMENT OF FORESTRY & NATURAL RESOURCES  
HORTICULTURE BUILDING  
WEST LAFAYETTE, INDIANA 47907

February 17, 1976

Mr. Ralph E. Bailey, Leader  
Eastern Timber Wolf Recovery Team  
P.O. Box 190  
Marquette, Michigan 49855

Dear Ralph:

Thank you for sending me a copy of the initial draft of the report, "Recovery Plan for the Eastern Timber Wolf." I am glad to comment on it, but I do so with certain reservations. The report is clear and well documented, although I could wish that we were farther along with the unpublished information. On the other hand, it probably would make no difference because Dave Mech undoubtedly is drawing on that, and his judgement of the situation is better than mine.

My first reaction was surprise at the extent of the reduction that is recommended for the peripheral range-- an area much larger than the primary range. Despite various published figures on inventories and kill, I am doubtful that a dominant carnivore like the wolf has the potential to replace a sustained man-caused mortality of half the winter population. Of course, it would have little opportunity to control its own numbers through normal social adjustments, so the "inversity" phenomenon probably would have maximum effect in producing a high rate of reproduction and survival.

On the other hand, I realize that the peripheral region is mixed farming and forest land, with many roads and developments. This just is not wolf range as we know it, and it is where the major amount of livestock damage is occurring. The greater this nuisance is, the more enemies the wolf will have. As long as a major area of security is provided, as this plan indicates, it probably will be desirable and necessary to reduce the wolf substantially in the peripheral zone and hold its numbers down.

Obviously, a significant part of the committee's background information is the fact that the Minnesota wolf population survived a regime of trapping and control more drastic than the one now proposed. Most important, it withstood the wasteful winter snaring via snowmobile that once was legal, and I assume that there would be no change in the present restrictions.



I think the report should state explicitly what hunting methods will be permitted and give emphasis to the prohibition of poisons, snaring, and shooting from aircraft. If any of these is allowed, I think you would lose control of the hunting kill. Since coyotes probably are being trapped, you may need to permit wolf trapping too. However, my preference would be for restricting the wolf kill to shooting during the fall deer season. There obviously will be a legal market, and some system of marking registered pelts will be needed.

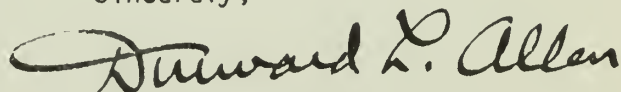
It seems to me that the recommended classification of the wolf as "threatened" in Minnesota is proper. I see no justification for claiming it as endangered at the present time, and it needs more sensitive treatment than to be declassified.

The true jeopardy of the Minnesota wolf is ahead. As the report points out, the advance of development in years to come will be a critical factor for this species in northern Minnesota. The management program in the primary range could help compensate, but it is an open question whether cutting and burning can be carried out with available funds and without great opposition from the people who regard these as intrusions into an important recreation area. The climax forest is potential caribou range, but the deer and wolf need early successions in which to survive. I doubt that the proposed introduction of caribou has much pertinence to needs of the wolf or that it can be successful under conditions favoring the wolf.

Whatever may be wrong with this plan can be adjusted on the basis of continued intensive monitoring of wolf, deer, and depredations on livestock. There needs to be some assurance that this monitoring will be continued and that studies of stock damage be adequate. If I interpret correctly, the Wolf Recovery Team will remain in existence and have the agreed-upon authority to make decisions relating to change in the wolf management program. On that basis the whole plan seems reasonable. I see no way in which the status of the wolf can be damaged immediately, and the future depends in large degree on how successful we are in protecting the range from being degraded and whittled away by development. An alert recovery team can help point the finger at such trends.

I hope these suggestions can be helpful to you.

Sincerely,

A handwritten signature in dark ink, reading "Durward L. Allen". The signature is fluid and cursive, with a large, sweeping initial 'D'.

Durward L. Allen  
Professor of Wildlife Ecology





# Department of Natural Resources

270 WASHINGTON ST., S.W.

ATLANTA, GEORGIA 30334

(404) 656-3500

Joe A. Tanner  
COMMISSIONER

January 26, 1976

Mr. Ralph E. Bailey  
Department of Natural Resources  
Region I Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

We have reviewed with interest the draft of the Eastern Timber Wolf Recovery Plan transmitted by Regional Director Jack E. Hemphill of the U. S. Fish and Wildlife Service. You and your team members have done an admirable job of bringing together the available factual information on the Eastern Timber Wolf and on the design of the recovery plan.

We would be less than candid, however, if we did not advise of our pessimism over that part of the plan relating to the feasibility of restocking the "Southern Appalachians Region" and, more specifically, the Georgia portion of it. Our attitude is based on existing problems as they concern the conservation of our black bear population. Despite continuing efforts in public awareness and education, adequate law enforcement remains our greatest need. Because of lingering fear and hatred of the wolf, and the added factors of potential predation on deer and livestock, the climate for a successful Eastern Timber Wolf program would be much less favorable, if not genuinely antagonistic.

Although there are substantial acreages of public lands in the Southern Appalachians, numerous private tracts are scattered throughout the area. These are either formed or in some stage of development as second homes or recreationally oriented enterprises. While the momentum in this direction has slowed somewhat owing to the recent economic slump, there is no doubt as to what the eventual use pattern will be as human pressures continue to mount. It does not favor the Wolf.





Mr. Ralph E. Bailey  
Page 2  
January 26, 1976

The Wolf Recovery Plan wisely provides for substantial research and contemplation before a decision is made to reintroduce the animal into unoccupied ancestral range. Other things being equal, a sober overview of the pros and cons should prove adequate to dispose of the Southern Appalachian part of the Plan. We certainly believe so.

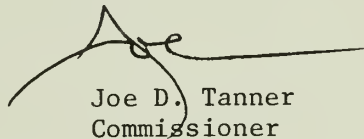
Our pessimism notwithstanding, we shall look forward to receiving copies of your final version of the Recovery Plan. Listed below are two staff members who are involved in the coordination of our endangered species program.

Ron Odom, Biologist  
Game and Fish Division  
Department of Natural Resources  
Route 2  
Social Circle, Ga. 30279

Jerry McCollum, Biologist  
Office of Planning and Research  
Department of Natural Resources  
Room 346, 7 Hunter Street  
Atlanta, Ga. 30334

Please feel free to contact both of these individuals or me as the need arises.

Sincerely yours,



Joe D. Tanner  
Commissioner

JDT:hc



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
Washington, D. C. 20250

2630

January 30, 1976



Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region 1 Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. *Ralph* Bailey:

We have reviewed the draft Recovery Plan for the Eastern Timber Wolf transmitted to Mr. Donald D. Strode by Jack R. Hemphill's letter of December 19, 1975. You and your team are to be congratulated on a good job well begun.

In consideration of the comments which follow, please recognize that these represent merely informal advice and assistance and in no way represent official Forest Service endorsement of the plan. Standard procedures for intra or interagency sign-off on Recovery Plans have not been finalized as yet.

Generally, we find the Recovery Plan is supportive of, and in parallel with, the Forest Service outlined program for the recovery of endangered species (see enclosed). You are plainly well into Phase II and in some respects Phase III of the Forest Service concept--that is you are beyond the stage of interim (protective) management and are well prepared to begin recovery management (as demonstrated by the unanimous vote of the team to recommend reclassification in Minnesota, page 6).

We believe, however, that considerable research into the interactions of habitat-prey-predator relationships is indicated before item 122-11 can be achieved in anything other than a general way. Such research would establish predictive models and strategies for alternative schemes of habitat manipulation. Since the heart of the proposed sanctuary and much of the peripheral range is National Forest land, the Forest Service would have a large role in habitat manipulation as you have indicated.

Some of the primary range and much of the peripheral range in Minnesota is in livestock raising (sheep) country. Perhaps some illegal killing of wolves could be halted if the farmers sustaining



depredations could be compensated for losses. There may presently be no authority for cash payment by governmental agencies to compensate valid claims of losses sustained, but such an approach would probably produce positive results. Regulations could be promulgated specifying where such payments might be authorized in the States of Minnesota, Wisconsin, Michigan, by county or township(s). Such an innovation might prove as effective as intensified law enforcement.

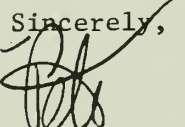
We believe it is unlikely that closing the deer season when populations reach such low numbers as 8 per sq. mile would really make much difference in hunter-wolf competition. Population densities required to sustain gainful hunting (interest) are probably considerably greater than that.

Based on five years of experience by W. D. Zeedyk as Wildlife Staff Officer in Western North Carolina, it is highly unlikely that Unit F, the Southern Appalachians, constitutes a reasonable restoration possibility. Deer numbers are generally low throughout this area, although there are a few pockets of high populations. There are no moose and few beavers. Wild boar (*Sus scrofa*) occur in some areas. Human inhabitants are well distributed throughout, except in Great Smoky Mountains National Park. Livestock growing (cattle) is an important segment of the agricultural industry in this area. Sportsman resistance to introducing a large predator would be very high. Wolves would be competitive with the endangered Eastern panther which may be repopulating the area.

Perhaps it is a typographical error, however, item CH-7 assigns the Forest Service responsibility for arranging with Canadian authorities the possible provision of caribou for restocking. Such an activity would be highly unusual and outside of the normal scope of the Forest Service role in wildlife management. We would suggest that you assign this task to Fish and Wildlife Service.

Thank you for the opportunity to comment.

Sincerely,



MERRILL L. PETOSKEY  
Director of Wildlife Management

Enclosure



A FOREST SERVICE PROGRAM  
TO PROTECT AND ENHANCE  
THREATENED AND ENDANGERED SPECIES

November 24, 1974





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The Endangered Species Act of the 1973 (Public Law 93-205) reaffirmed and strengthened the Nation's commitment to the conservation of endangered and threatened species of plants and animals. The Act requires the Forest Service and all other agencies to utilize its authorities in furtherance of the purposes of this Act. It further requires the Forest Service to "insure that actions authorized, funded, or carried out--do not jeopardize" endangered or threatened species or result in destruction or modification of their critical habitats.

The Secretary of the Smithsonian Institution, in conjunction with other affected agencies, is authorized by the Act to review and recommend to Congress by December 1974 species of plants which are threatened or endangered and methods of conserving them. Otherwise endangered plants are not covered by the Act.

The Secretaries of Interior and Commerce, in consultation with the States, are responsible for designating species of wildlife as threatened or endangered and for designating critical habitats. The list of threatened species has not yet been developed. One-hundred and nine species are now included on the list of endangered species.

Forest Service programs on threatened and endangered species must be strengthened to insure full compliance with the Act. Programs are to be carried out directly and through our cooperators for the conservation of endangered and threatened species and their habitats.



A PLAN FOR THE FOREST SERVICE

A preliminary interpretation of Endangered Species Act of 1973 suggests that all arms of the Forest Service--National Forest System, Research, and State and Private Forestry--carry out activities that can contribute to the conservation of endangered species. The authorities under which these activities are carried out (Appendix A), plus the 1973 Act, provide the basis for our accelerated involvement.





### OBJECTIVES

A crash program has been developed to enable the Forest Service to make substantial progress toward the goals of the 1973 Endangered Species Act. Within five years, major research, management, and assistance activities are proposed for the conservation of 53 domestic and 23 foreign species (Appendix A). Of the 109 endangered species in the United States, 39 are found on National Forest System lands or on forest lands where assistance is provided under State and Private Forestry programs. Two of the 39 species, the Ivory-billed Woodpecker and Eskimo Curlew, are probably extinct, and are not included in the proposed program. Sixteen additional domestic species are of high priority (Appendix B) and are included in the program because of their association with forestry activities and their potential conservation through research and forestry assistance programs.

The program will also attempt to conserve 23 endangered species in foreign countries through research. Major centers of research expertise will be developed in India, Pakistan, and Morocco, utilizing PL-480 funds.

Activities required under Phase I have been substantially accomplished for 12 of the 53 domestic species and three of the 23 foreign species (Table 1). The job ahead then is to cover the remaining species under Phase I and to move as rapidly as possible into Phases 2 and 3 for additional species.



A reasonable goal would seem to be to complete Phase I activities for all 53 domestic species within three fiscal years. If funds are appropriated in FY 1976, this work could be essentially complete by 1978. For foreign species, Phase 1 activities would be complete by 1979.

Accomplishment of Phase 2 of the program requires considerable more time and investments of funds. Hopefully, after 2 or 3 years of work, some of the species could be advanced to the activities called for under Phase 3. At the end of the first 5 years of the program, about one-third of the domestic species could be expected to be covered under Phase 2, but only four species--California Condor, Puerto Rican Parrot, Red-cockaded Woodpecker, and Kirtland's Warbler--would be out of danger and subject to routine maintenance programs. Adequate knowledge would be available to insure recovery of two foreign species.

Because of the uncertainties of rates of progress and of numbers of species involved, this program does not set objectives and schedule activities beyond five years. However, a major program lasting over 10 to 20 years is anticipated. Obviously, the situation for some species will require a continuing endangered species program.



Table 1.--Number of currently designated endangered species included under each phase of the Forest Service program for endangered wildlife species.

Fiscal Year	<u>Phase of Program</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>Halt</u>		<u>Interim</u>		<u>Insure</u>	
	<u>Deterioration</u>		<u>Management</u>		<u>Recovery</u>	
	<u>Domestic</u>	<u>Foreign</u>	<u>Domestic</u>	<u>Foreign</u>	<u>Domestic</u>	<u>Foreign</u>
1974	12	3	3	3	0	0
1975	12	3	3	3	0	0
1976	22	3	3	3	0	0
1977	39	3	3	3	0	0
1978	53	3	7	3	0	0
1979	53	23	7	3	3	0
1980	53	23	7	3	3	0
1981	53	23	13	4	4	2



### Activity Flow

Network analyses were utilized to develop the plan. Involved were: a Means-Ends Analysis or Step-Down Analysis to clearly identify the how's and why's, a PERT analysis to establish sequential steps, and finally a Convergence Analysis (Figure 1) to establish objectives, required and desired activities, bases for decisions, and flows of activities (Table 2) and Costs (Table 3).

Each phase of the plan contains one or more arrays:

Linear array: The lead or critical efforts--includes only those activities essential to achieve the intermediate objective and thus to converge on the overall objective. Activities are arranged in logical order of major phases, steps, and projects to be performed and are not necessarily in chronological order.

Concurrent array: Desirable efforts--includes activities which are not critical to the achievement of objectives. If successful, they will provide information that will improve performance in the linear array. The logic of this array depends upon the logic of the linear array. Activities in the concurrent array have more immediate and direct relevance to the linear array than do the activities in the supplementary array.





Supplemen-  
tary array:

Peripheral efforts--includes activities which will yield results beyond the immediate program or which have a low probability of achieving immediate goals.

Few activities are included in the concurrent and supplemental arrays in order to conserve resources. However, activities outlined under these arrays, such as support of long-term research at academic centers of excellence, will ultimately contribute to efficiency and effectiveness of the linear array.

The plan presents a generalized program for fulfillment of responsibilities of the Forest Service. It is not a plan for one species. However, all activities required for each species are included in the plan. Phase 1 of the plan must be completed for each species. Usually, Phase 2 would follow. Depending on the situation, state of knowledge, and previous actions, it may be possible to go directly to Phase 3.

Other organizations play key roles in the program. They may assume full responsibilities for certain parts of the planned work. All plans and programs must be coordinated to assure that all needed actions are taken with a minimum of overlap and confusion and without missing critical steps. Close coordination with others is essential throughout.



FIGURE 1.--LOGIC DIAGRAM

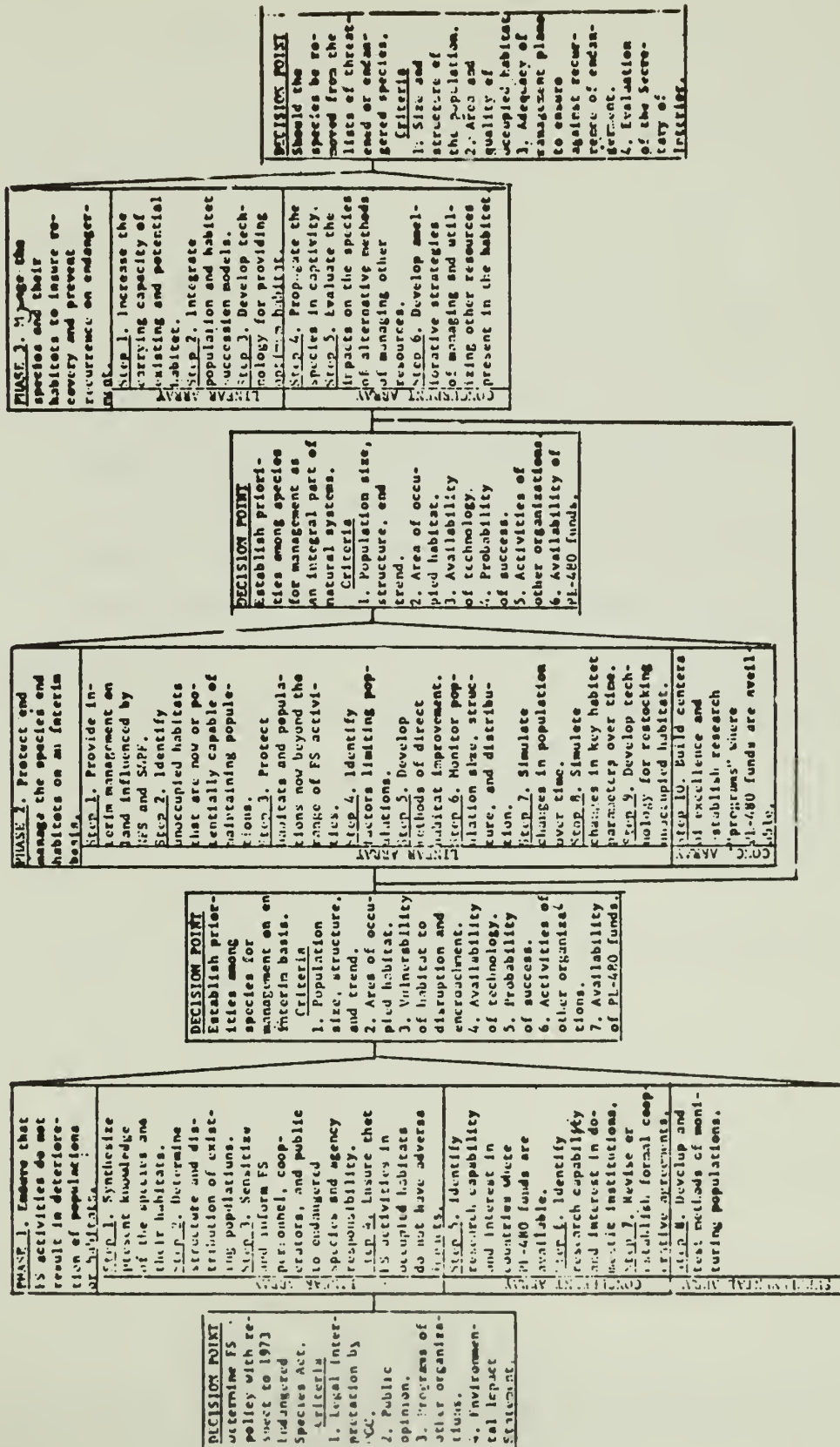




TABLE 2.--GENERALIZED FLOW OF ACTIVITIES

Decision Point. Determine Forest Service policy with respect to 1973 Endangered Species Act.

Criteria:

1. Legal interpretation by OGC
2. Public opinion
3. Programs of other organizations
4. Environmental Impact Statement

Phase 1. Ensure that Forest Service activities do not result in deterioration of populations and habitats.

Linear Array

- 1.1 Synthesize present knowledge of the species and their habitats
  - 1.1.1 Locate sources of information
  - 1.1.2 Develop a computerized interagency system for storage and retrieval of information
  - 1.1.3 Correlate species abundance and activities with habitat
  - 1.1.4 Document the synthesis
  - 1.1.5 Prepare initial guidelines for management
  - 1.1.6 Amend Forest Service Manuals (Administrative)
  - 1.1.7 Identify significant gaps in knowledge inhibiting management of the species
  - 1.1.8 Determine needed research and managerial actions for conservation of each species
- 1.2 Determine structure and distribution of existing populations





- 1.2.1 Consult known authorities, the literature, and other sources of information
- 1.2.2 Conduct field surveys to locate occupied range and population structure
- 1.2.3 Collate information on distribution, numbers, age, and sex
- 1.3 Sensitize and inform Forest Service personnel, cooperators, and the public to endangered and threatened species and agency responsibilities.
  - 1.3.1 Prepare and distribute training aids and I&E materials
  - 1.3.2 Plan and execute training through workshops, seminars. etc.
- 1.4 Ensure that Forest Service activities in occupied habitats do not have adverse impacts.
  - 1.4.1 Develop and issue policy statements
  - 1.4.2 Amend Forest Service Technical Manual
  - 1.4.3 Amend Form AD 623, Application for Assistance  
(used by S&PF) to assure compliance with the Act
  - 1.4.4 Provide technical training
  - 1.4.5 Coordinate protection of threatened and endangered species with all other activities

Concurrent Array

- 1.5 Identify research capability and interest in countries where PL-480 funds are available



1.6 Identify research capability and interest in other Federal agencies, universities, and other institutions

1.7 Revise or establish formal cooperative agreements

1.7.1 Review and revise as appropriate existing agreements with Fish and Wildlife Service

1.7.2 Review and revise as appropriate existing agreements with the States

1.7.3 Review and revise as appropriate agreements with other cooperators

#### Supplemental Array

1.8 Develop and test methods of monitoring populations

Decision Point. Identify species incapable of maintaining or increasing levels of population.

#### Criteria:

1. Population size, structure, and trend
2. Area of occupied habitat
3. Vulnerability of the habitat to disruption and encroachment
4. Availability of technology
5. Probability of success
6. Activities of other organizations
7. Availability of PI-480 funds

Phase 2. Protect and manage the species and habitats on an interim basis pending development of effective recovery techniques and procedures.

#### Linear Array

2.1 Provide interim management on land influenced by NFS and S&PF



- 2.1.1 Integrate new technology to form management plans
- 2.1.2 Apply direct improvement practices
- 2.1.3 Coordinate the plans and activities of other Forest Service programs
- 2.1.4 Provide technical assistance to State and private forest landowners
- 2.1.5 Evaluate effectiveness of interim management
- 2.2 Identify apparently suitable but presently unoccupied habitats in or outside the National Forest System.
- 2.3 Protect habitats and populations now beyond the range of National Forest System activities to obtain control of occupied or potential habitats vulnerable to exploitation.
  - 2.3.1 Coordinate with land exchange and acquisition activities
  - 2.3.2 Secure protective easements from private landowners
  - 2.3.3 Exchange lands
  - 2.3.4 Purchase lands
- 2.4 Identify factors limiting populations
  - 2.4.1 Food preference and utilization
  - 2.4.2 Cover requirements
  - 2.4.3 Relationship to other wildlife species
  - 2.4.4 Behavioral characteristics
  - 2.4.5 Reproductive cycle
  - 2.4.6 Synthesize information
- 2.5 Develop methods of direct habitat improvement
- 2.6 Monitor population size, structure, and distribution



## 2.7 Simulate changes in population over time

### 2.7.1 Develop and test conceptual models

### 2.7.2 Project trends in population over time (population models)

## 2.8 Simulate changes in key habitat parameters over time, given the existing state of the ecosystem and the exclusion of all activities except those known to have no adverse impacts (succession models)

## 2.9 Develop technology for restocking unoccupied habitat

### 2.9.1 Develop and test capture, handling, and release techniques

### 2.9.2 Develop captive propagation capability

#### 2.9.2.1 Identify zoos or other institutions with expertise and capability

#### 2.9.2.2 Gain expertise and experience through captive propagation of closely related species

### 2.9.3 Develop techniques for transplanting from wild populations

## Concurrent Array

## 2.10 Build centers of excellence and establish research "programs" where PL-480 funds are available

Decision Point. Establish priorities among species for management as an integral part of natural systems. ®

## Criteria

1. Population size, structure, and trend

2. Area of occupied habitat





3. Availability of technology
4. Probability of success
5. Activities of other organizations
6. Availability of PL-480 funds

Phase 3. Manage the species and their habitats to achieve recovery  
and prevent recurrence of endangerment

Linear Array

- 3.1 Increase the carrying capability of existing and potential habitats
  - 3.1.1 Modify habitats in order to achieve optimum state and to maintain a desirable rate and direction of ecological succession
  - 3.1.2 Coordinate the activities of Forest Service programs
  - 3.1.3 Populate unoccupied habitats through transplanting or inducing natural expansion of range
  - 3.1.4 Evaluate the effectiveness of management
    - 3.1.4.1 Monitor size, structure, and distribution of populations
    - 3.1.4.2 Monitor area and quality of habitats
- 3.2 Integrate population and habitat succession models
- 3.3 Develop technology for providing optimum habitat

Concurrent Array

- 3.4 Propagate the species in captivity
- 3.5 Evaluate the impacts on the species of alternative methods of managing other resources
- 3.6 Develop strategies of managing and utilizing other resources compatible with endangered species and their habitats



Supplemental Array

- 3.7 Basic studies of the process of extinction and mechanisms  
for prevention
  - 3.7.1 The evolution of island faunas
  - 3.7.2 Species saturation in island ecosystems
  - 3.7.3 Species diversity X area relationships
  - 3.7.4 Minimum population levels for maintenance of genetic  
stability
  - 3.7.5 Relationships between stability and diversity in  
natural systems



### Cost Flow

Costs for the program have been estimated on the basis of obtaining the previously described objectives during the next five fiscal years. Beyond fiscal year 1981 substantial costs would be incurred to complete activities under Phases 2 and 3 for all threatened and endangered species found on or near National Forests or on lands affected by cooperative forestry programs.

These costs in the distant future are almost impossible to estimate considering the current lack of information on numbers of species involved, greatly increased numbers of endangered species that are expected to be added to the list, a completely uncertain situation with respect to official listing of threatened species, and the great uncertainties about endangered and threatened plants.

Costs for research programs have been estimated on the basis of \$75,000 to finance a scientist and supporting personnel. The assumption has been made that research facilities are basically adequate; however, detailed planning for work on certain species may show that additional facilities, necessitating capital investments, are required. Activities under each of the arrays are the basis for estimating costs. In many cases, it is impossible to estimate costs on each fraction of an activity. Therefore, costs are estimated for a number of related activities. For example, the costs for Item 1.1, to synthesize present knowledge of the species and their habitats, are estimated at \$50,000 per species. About \$3,000 to \$5,000 per species would be required for Item 1.1.2, the pulling together of all available information, and making this information available.





Table 3. Costs (\$1,000) for a Forest Service program for threatened and endangered wildlife

Case 1. Ensure that Forest Service activities do not result in deterioration of population and habitats.	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	'FY 198
NFS	600	611	935	1,185	1,310	460	460	460
R	-	-	865	1,360	850	150	150	175
S&PF	-	-	291	287	287	-	-	-
<u>near Array</u>								
1 Synthesize present knowledge of the species and their habitats.	25	25	155	175	200	-	-	-
NFS	-	-	555	1,050	750	50	50	75
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
2 Determine structure and distribution of existing populations.	125	125	65	160	200	200	200	200
NFS	-	-	100	100	-	-	-	-
R	-	-	43	83	83	-	-	-
S&PF	-	-	-	-	-	-	-	-
3 Sensitize and inform FS personnel cooperators, and public to endangered species and agency responsibilities.	50	51	220	240	260	260	260	260
NFS	-	-	50	50	-	-	-	-
R	-	-	140	101	101	-	-	-
S&PF	-	-	-	-	-	-	-	-
4 Ensure that FS activities in occupied habitats do not have adverse impacts.	400	400	465	570	600	-	-	-
NFS	-	-	50	50	-	-	-	-
R	-	-	103	103	103	-	-	-
S&PF	-	-	-	-	-	-	-	-



<u>Concurrent Array</u>		FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 198
5	Identify research capability and interest in countries where PL-480 funds are available	-	-	-	-	-	-	-	-
	NFS								
	R	-	-	25	25	25	25	25	-
	S&PF	-	-	-	-	-	-	-	-
6	Identify research capability and interest in domestic institutions.	-	-	-	-	-	-	-	-
	NFS								
	R	-	-	5	5	-	-	-	-
	S&PF	-	-	-	-	-	-	-	-
7	Revise or establish formal cooperative agreements.	-	10	30	40	50	-	-	-
	NFS								
	R	-	-	5	5	-	-	-	-
	S&PF	-	-	5	-	-	-	-	-
<u>Supplemental Array</u>									
8	Develop and test methods of monitoring populations.	-	-	-	-	-	-	-	-
	NFS								
	R	-	-	75	75	75	75	75	75
	S&PF	-	-	-	-	-	-	-	-
Phase 2.	Protect and manage the species and habitats on an interim basis	160	210	809	1,009	1,920	3,144	3,800	4,420
	NFS								
	R	15	15	285	975	1,550	2,500	3,000	3,000
	S&PF	-	-	109	313	313	758	758	758
<u>Interim Array</u>									
1	Provide interim management on land influenced by NFS and S&PF	110	120	294	394	620	1,599	2,245	1,865
	NFS								
	R	-	-	-	-	-	-	-	-
	S&PF	-	-	99	308	308	758	758	758



	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 198
2 Identify unoccupied habitats that are now potentially capable of maintaining populations.	10	15	285	305	390	400	400	400
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
3 Protect habitats and populations now beyond the range of FS activities	10	45	175	220	300	520	530	530
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
4 Identify factors limiting populations.	30	30	55	90	300	300	300	300
NFS	15	15	60	750	825	1,175	1,175	1,175
R	-	-	10	5	5	-	-	-
S&PF	-	-	-	-	-	-	-	-
5 Develop methods of direct habitat improvement.	-	-	-	-	150	150	150	150
NFS	-	-	-	-	-	100	100	100
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
6 Monitor population size, structure, and distribution.	-	-	-	-	160	175	175	175
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
7 Simulate changes in population over time.	-	-	-	-	-	-	-	-
NFS	-	-	75	75	75	75	75	75
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-



	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981
3 Simulate changes in key habitat parameters over time.	-	-	-	-	-	-	-	-
NFS	-	-	150	150	150	150	150	150
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
3 Develop technology for restocking unoccupied habitat.	-	-	-	-	-	-	-	-
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
current Array	-	-	-	-	-	-	-	-
10 Build centers of excellence and establish research "programs" where PL-480 funds are available.	-	-	-	-	500	1,000	1,500	1,500
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
ase 3. Manage the species and their habitats to insure recovery and prevent recurrence of endangerment.	15	112	225	353	510	796	800	840
NFS	-	-	150	300	875	675	375	375
R	-	-	-	-	-	42	42	42
S&PF	-	-	-	-	-	-	-	-
near Array	15	25	85	173	260	496	500	510
1 Increase the carrying capacity of existing and potential habitat.	-	-	-	-	-	-	-	-
NFS	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	12	12	12





	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981
2 Integrate population NFS and habitat succession models. R	-	-	150	300	450	450	150	150
S&PF	-	-	-	-	-	-	-	-
3 Develop technology NFS for providing optimum habitat. R	-	-	-	-	225	225	225	225
Concurrent Array								
4 Propagate the NFS species in captivity. R	-	-	-	-	-	-	-	-
S&PF	-	-	-	-	-	-	-	-
5 Evaluate the impacts NFS on the species of alternating methods of managing other resources. R	-	10	70	90	125	125	125	150
S&PF	-	-	-	-	-	-	-	-
6 Develop ameliorative NFS strategies of managing and utilizing other resources present in the habitat. R	-	30	70	90	125	175	175	180
S&PF	-	-	-	-	-	-	-	-
7 Basic studies of the NFS process of extinction and mechanisms for prevention. R	-	-	-	-	200	-	-	-
S&PF	-	-	-	-	-	-	-	-
Supplemental Array								



	FY 1974	FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981
Subtotals:	775	933	1,969 <sup>1/</sup>	2,547 <sup>1/</sup>	3,740 <sup>1/</sup>	4,400 <sup>1/</sup>	5,060 <sup>1/</sup>	5,720 <sup>1/</sup>
NFS								
R	-	-	1,300	2,635	3,275 <sup>2/</sup>	3,325 <sup>3/</sup>	3,525 <sup>4/</sup>	3,550 <sup>4/</sup>
S&PF	-	-	669	600	600	800	800	800
GRAND TOTAL:	775	933	3,669	5,782	7,617	8,525	9,385	10,070

1/ Includes \$933 M of FY 1975 funding

2/ Includes \$500 M of PL 480 funds

3/ Includes \$1,000 M of PL 480 funds

4/ Includes \$1,500 M of PL 480 funds



through a Technical Information System. The maintenance and use of this Technical Information System, beyond the first two years for Phase 1, would be approximately \$50,000 per year.

Costs for National Forest System and State and Private Forestry have been estimated on similar bases and assumptions. Past experience with the various phases of management provided reasonable guidelines, and the cost of maintaining a biologist and support is now about \$60,000 per year.

The proposed Forest Service program will involve substantial investments (Table 3). An increased appropriation of \$2.736 million in 1976 is needed to quickly initiate the activities in Phase 1--the synthesis of existing information, census of populations, training, and protective management. Costs increase progressively to \$10.070 million in FY 1981 as greater emphasis is placed on original research, on-the-ground management, and technical services to States and private foresters. The use of PL-480 funds will increase to \$1.5 million by FY 1980 to support basic and applied research related to conservation of threatened and endangered species.





## Organization

A full-time program coordinator is needed to guide Forest Service activities related to threatened and endangered species of plants and animals. Our program must be closely meshed with programs of States and of other Federal agencies, particularly the Fish and Wildlife Service. Close coordination is essential at National, Regional, State, and local levels. Similarly, the ties between management and research must be particularly close. Flexibility is needed to shift resources effectively between research and management as needs change over time. Finally, the activities of Regions, Areas, and Stations must be coordinated to form a Forest Service program having unity and strength.

The program coordinator must relate frequently to the Office of Endangered Species of the Fish and Wildlife Service and with other - Federal agencies. Therefore, the position should be established in the WO.

A management group composed of the Deputy Chiefs for Research, State and Private Forestry, and National Forest System, or their associates, shall oversee the endangered species program. The program coordinator shall serve as staff assistant to the management group. The program coordinator shall be located in the WO Division of Wildlife Management and will report to the Wildlife Division Director.

The program coordinator, after consulting with all appropriate elements of the Forest Service and other agencies, will develop a program analysis as a basis for short-term and long-range plans for



the endangered species program. He would prepare an annual operating plan showing required manpower and funds, proposed allocations to units in the Forest Service and to cooperators, and expected accomplishments. He also would prepare required annual and periodic reports of accomplishments and status of endangered species of concern to the Forest Service.

### Funding

The endangered species program of the Forest Service should be funded through the existing line items for (1) Wildlife Habitat Management under National Forest Protection and Management, (2) Wildlife, Range, and Fish Habitat Research under Research, and (3) General Forestry Assistance (GFA) under State and Private Forestry Cooperation. Utilizing the Cost Flows (Table 3) and Decision Criteria chart (Appendix B), tentative allocations of the FY 1976 increases in appropriations have been developed.

Research.--The proposed allocation of Research funds among Stations (Table 4) is unequal because of the unequal distribution of endangered species and associated research to be performed.

Stations have great latitude in methods of accomplishing the assigned tasks. However, since two-thirds of the \$1.3 million increase in FY 1976 is associated with Phase I activities, much of the activity will likely be accomplished through coop-aid and grants to universities and other research institutions. In subsequent years, as Phase I activities are completed, a greater proportion of the total



funds available would be utilized for in-house research. Even then it is likely that 10-20 percent of the total funds would be utilized for grants and coop-aid.



Table 4. Allocation of Research funds proposed for Fiscal Year 1976.

<u>Station</u>	<u>Phase</u>	<u>Location</u>	<u>Species</u>	<u>Funds</u> <u>(\$1,000)</u>
PSW	I	Honolulu	Ou	\$ 50
			Nihoa finch	50
			Palila	50
			Crested honeycreeper	50
			Oahu creeper	50
			Station Total	250
INT	I	Bozeman Logan	Northern Rocky Mountain wolf	50
			Utah prairie dog	50
			Woundfin	50
			Lahontan cutthroat trout	50
			Station Total	\$ 200
RM	I	Tucson	Greenback cutthroat trout	50
			Gila trout	50
			Arizona (Apache) trout	50
	II	Rapid City	Black-footed ferret	50
		Tucson	Mexican duck	60
				\$ 260
NC	II	St. Paul	Eastern timber wolf	75
	III		Kirtland's warbler	75
			Station Total	\$ 150





SE	I	Clemson	Bachman's warbler	50
	II	Lehigh Acres	Southern bald eagle	75
	III	Clemson	Red-cockaded woodpecker	<u>75</u>
			Station Total	\$ 200
ITF	I	Rio Piedras	Puerto Rican plain pidgeon	50
	II		Puerto Rican parrot	<u>75</u>
			Station Total	\$ 125
WO		Forest Environment Research	Develop technical information system	50
			Develop PL-480 program	<u>25</u>
			Station Total	\$ 75
				<u><u>          </u></u>
			GRAND TOTAL	\$1,300



State and Private Forestry.--The proposed allocation of State and Private Forestry funds for FY 1976 (Table 5) is based on the occurrence of endangered species which could be affected by the various cooperative forestry programs. Funding would be provided at the national level for one-half man year for a program leader position on the staff of the Director of Wildlife Management. An additional 3 man years of Forest Service staffing is proposed to provide program leadership in the field. This would provide for wildlife habitat specialists in Region 5, Southeastern Area, and Northeastern Area (to serve Northeastern Area, Region 1, and Region 2).

Funds for States would be provided on a project basis for employment of personnel, contracting, or other means of carrying out the approved project. Criteria for funding priorities will be guided by the Forest Service Endangered Species program.



Table 5. Allocation of Increases in State and Private Forestry funds (GFA) proposed for FY 1976

<u>Region/Area</u>	<u>Phase</u>	<u>Federal Funds</u>	
		<u>FS</u>	<u>State Cost-Share</u>
1	I	-	7,500
	II	-	<u>3,200</u>
		-	10,700
2	I	-	7,500
	II	-	<u>3,200</u>
			10,700
5	I	45,000	50,400
	II	<u>15,000</u>	<u>21,000</u>
		60,000	71,400
SA	I	45,000	43,600
	II	<u>15,000</u>	<u>18,800</u>
		60,000	62,400
NA	I	45,000	24,500
	II	<u>15,000</u>	<u>10,300</u>
		60,000 <sup>1/</sup>	34,800
WO		30,000 <sup>2/</sup>	

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<sup>1/</sup> NA Endangered species specialist will cover R-1 and R-2 also

<sup>2/</sup> One-half funding for National Endangered Species specialist in WL-WO.





National Forest System.--The suggested distribution of National Forest System funds (Table 6) is based on the numbers of endangered species found in each Region and the priority listing of species by phases as shown in Appendix B.

The Regions have considerable flexibility in allocating funds to those species having the greatest need for improved environmental conditions or protection.

In addition to the \$1.036 million increase an estimated \$933,000 will be allocated to the Regions for improving the habitat of other endangered, threatened, and unique species.



Table 6. Allocation of increases in National Forest System funds proposed for Fiscal Year 1976.

<u>Region</u>	<u>Phase</u>	<u>Funds (1,000)</u>
1	I	20
	II	<u>5</u>
	Total	25
2	I	54
	II	<u>5</u>
	Total	59
3	I	38
	II	<u>160</u>
	Total	198
4	I	60
	II	<u>76</u>
	Total	136
5	I	33
	II	136
	III	<u>71</u>
	Total	240
8	I	25
	II	68
	III	<u>82</u>
	Total	175
9	I	6
	II	87
	III	<u>85</u>
	Total	178
ITF	II	<u>25</u>
	Total	25

GRAND TOTAL 1,036<sup>1/</sup>

<sup>1/</sup> Admin. costs include \$30,000 (one-half man year) for WL staff position jointly funded with S&PF



Forest Service Authorities in Wildlife and Wildlife Habitat  
As Related to Endangered Species Act of 1973

Existing authorities are adequate to allow the Forest Service to proceed immediately to further the purposes of the Endangered Species Act of 1973.

National Forest System

Authority to manage wildlife and wildlife habitats on the National Forests and Grasslands derives from the Organic Act of 1897 (16 U.S.C. 551), the Transfer Act of February 1, 1905 (16 U.S.C. 473), the Bankhead-Jones Farm Tenant Act of July 1937 (50 Stat. 525, as amended; 7 U.S.C. 1010-1012), the Multiple-Use Sustained Yield Act of June 1960 (74 Stat. 215; FSM 1021), and Secretary's Regulations related to the above (see FSM 2601).

Authority to protect wildlife on the National Forests and National Grasslands stems from the Acts of March 3, 1905 (33 Stat. 873; 16 U.S.C. 559), May 23, 1908 (35 Stat. 251, 259; 16 U.S.C. 553), and June 13, 1940 (54 Stat. 391; 18 U.S.C. 1114), and related regulations (FSM 2601.2).

Since wildlife protection and management spans the legal responsibilities of other State and Federal agencies, the degree of Forest Service involvement is specified in formal cooperative agreements between the Service and the U.S. Fish and Wildlife Service, the International Association of Game and Fish Commissioners, and the various States. This existing structure should be utilized to specify shared responsibilities under this Act.



The scope of the Multiple-Use Sustained Yield Act of 1960 is sufficiently broad to encompass and is not in conflict with the Endangered Species Act of 1973. From Section 2, "In the administration of the National Forests due consideration shall be given to the relative values of the various resources in particular areas." We interpret that Congress has identified the relative value of endangered species in comparison with other resource values in stating the objectives of the Endangered Species Act.

### Research

The Forest Service has been granted broad authority under the McSweeney-McNary Act of May 22, 1925, (FSM 4210) to conduct necessary research on forest animals and their habitats.

Sec. 1 "The Secretary of Agriculture is hereby authorized and directed to conduct such investigations, experiments, and tests as he may deem necessary. . ."

Sec. 5 "For. . . determining the life histories and habits of forest animals, birds, and wildlife whether injurious to forest growth or of value as supplemental resource, and in developing the best and most effective methods for their management and control at Forest experiment stations. . ."

The Fish and Wildlife Service, in the Department of the Interior, also has authority and responsibility for wildlife research. In cooperative research, that Agency has primary responsibility for fundamental fish and wildlife research, while the Forest Service has a similar role for habitat and land-use research. This relationship





was defined in a memorandum of understanding between the two agencies in 1960, as follows:

"The Fish and Wildlife Service and the Forest Service will conduct cooperative research relating to fish and wildlife, including rodents, and wildlife habitat management of Forest and Range lands wherever and whenever it is of mutual interest to the two Agencies. Such cooperative research will be guided by the following:

a. Generally, research involving the two Agencies will be coordinated, with the Fish and Wildlife Service emphasizing the wild animal phase and the Forest Service, emphasizing the vegetation and land-use phases.

b. Where lack of finances limits the participation of either Agency in coordinated research, joint planning and evaluation of results will remain the guiding principle."

Public Law 480 provides authority for making research grants to foreign universities, utilizing soft-currency in countries where there is an agreement to use such funds for research purposes.

#### State and Private Forestry

All S&PF programs, as listed in "Forestry Assistance Programs in cooperation with State Forestry Agencies" must comply with the Act. The ultimate responsibility for insuring that actions authorized, funded, or carried out by the Forest Service and its cooperators



do not jeopardize such species rests with the Forest Service. There is, therefore, need for developing procedures and coordination among the State Forester, State Wildlife Director, USDI Fish and Wildlife Service, and the Forest Service to meet S&PF responsibilities under the Act.

The S&PF programs with the greatest potential for affecting the habitat of threatened and endangered species either beneficially or adversely are the Cooperative Forest Management Act of 1950, as amended, Title X of the Agriculture and Consumer Protection Act of 1973, and the Forest Pest Control Act of 1947. The Cooperative Forest Management Act authorizes the Secretary of Agriculture "to cooperate with State Foresters or appropriate officials of the several States, Territories, and possessions for the purpose of encouraging the States, Territories, and possessions to provide technical services to private landowners, forest operators, wood processors, and public agencies, with respect to the multiple-use management and environmental protection and improvement of Forest lands, the harvesting, marketing, and processing of Forest products, and the protection, improvement, and establishment of trees and shrubs in urban areas, communities, and open spaces." Title X of the Agriculture and Consumer Protection Act authorizes the Secretary to cost-share with private land owners for environmental conservation measures including tree planting and timber stand improvement.



Forest Pest Control programs may have to be modified, deferred, or canceled if an action would jeopardize the habitat of an endangered species. When critical habitat can be protected by pest control, which does not adversely affect the endangered species, programs may emphasize protection activities. Forest Pest Control with its leadership role in the WO Pesticides Coordinating Committee must work very closely in this matter with all involved elements of the Forest Service. The rest of FPC's activity in this matter would parallel that of S&PF in general.

There are 10 other cooperative programs administered by S&PF in cooperation with State Forestry agencies involving Federal-State cooperative programs will be planned, designed, and administered to improve threatened and endangered species habitat and environment with assurance that such programs will not cause any significant adverse impacts.



Appendix A. Domestic endangered species included in the Forest Service program and estimated phase of current activity. Species on or near National Forest System lands are asterisk.

Domestic Species

	Phase		
	1	2	3
<u>Fishes</u>			
*Shortnose Sturgeon	x		
*Lahontan Cutthroat Trout	x		
*Piute Cutthroat Trout	x		
*Greenback Cutthroat Trout	x		
*Gila Trout	x		
*Arizona (Apache) Trout	x		
*Humpback Chub	x		
*Woundfin	x		
*Colorado River Squawfish	x		
*Kindall Warm Springs Dace	x		
*Unarmored Threespine Stickleback	x		
*Gila Top Minnow	x		
<u>Reptiles and Amphibians</u>			
*American Alligator		x	
*Blunt-nosed Leopard Lizard	x		
Puerto Rican Boa	x		
<u>Birds</u>			
*Aleutian, Canada Goose	x		
*Mexican Duck		x	





Birds (cont.)

	Phase		
	1	2	3
*Brown Pelican	x		
*California Condor			x
*Southern Bald Eagle		x	
*American Peregrine Falcon		x	
*Arctic Peregrine Falcon	x		
*Masked Bobwhite	x		
*Whooping Crane		x	
*Puerto Rican Parrot		x	
*Red-Cockaded Woodpecker			x
*Bachman's Warbler	x		
*Kirtland's Warbler			x
Puerto Rican Plain Pigeon	x		
Puerto Rican Whip-poor-will	x		
Crested Honeycreeper	x		
Kauai Akialoa	x		
Kauai Nukupuu	x		
Maui Nukupuu	x		
Akiapolaau	x		
Hawaii Akepa	x		
Maui Akepa	x		
Oahu Creeper	x		
Molokai Creeper	x		
Maui Parrotbill	x		



	Phase		
	1	2	3
Ou	x		
Nihoa Finch	x		
Palila	x		
<u>Mammals</u>			
*Indiana Bat	x		
*Utah Prairie Dog	x		
*Eastern Timber Wolf		x	
*Northern Rocky Mountain Wolf	x		
*Red Wolf		x	
*San Joaquin Kit Fox		x	
*Black-footed Ferret	x		
*Florida Panther	x		
*Eastern Cougar	x		
*Florida Manatee (sea cow)	x		



Foreign Species

<u>Country</u>	<u>Species</u>	<u>Phase</u>		
		1	2	3
Pakistan	Gharial	x		
	Western Tragopan Pheasant	x		
	Great Indian Bustard	x		
	Leopard	x		
India	White-eared Pheasant	x		
	Siberian White Crane	x		
	Lion-tailed Macaque	x		
	Cheetah		x	
	Asiatic Wild Dog	x		
	Asiatic Lion		x	
	Tiger		x	
	Great Indian Rhinocerus	x		
	Brow-antlered Deer	x		
	Swamp Deer	x		
	Pygmy Hog	x		
	Seladang	x		
	Kashmir Stag	x		
	Wild Yak	x		
Morocco	Spanish Imperial Eagle	x		
	Barbary Hyaena	x		
	Culviers Gazella	x		
	Mhorra Gazelle	x		
	Moroccan Dorcas Gazella	x		



Appendix B. Decision criteria chart including species in the Forest Service program for endangered species.

Species	Population size, structure, and trend	Area of occupied habitat	Vulnerability of habitat to disruption and encroachment	Availability of technology	Probability of success	Activities of other organizations	Dependence on NFS habitats	Priority
<b>Fishes</b>								
Shortnose Sturgeon	L	L	M	M	L	L	L	L
Lahontan Cutthroat Trout	L	L	H	L	H	L	H	H
Piute Cutthroat Trout	L	L	H	L	H	L	H	H
Greenback Cutthroat Trout	L	L	H	L	H	L	H	H
Gila Trout	L	L	H	L	H	L	H	H
Arizona (Apache) Trout	L	L	H	L	H	L	H	H
Humpback Chub	L	L	H	L	M	L	M	M
Woundfin	L	L	M	L	M	L	M	M
Colorado River Squawfish	L	L	H	M	M	M	L	M
Kindall Warm Springs Dace	L	L	H	M	M	L	M	M
Unarmored Threespine Stickleback	L	L	H	L	M	L	M	M
Gila Top Minnow	L	L	H	L	H	L	M	M
<b>Reptiles and Amphibians</b>								
American Alligator	H	H	M	H	H	H	L	L
Blunt-nosed Leopard Lizard	L	L	H	L	M	L	L	M
Puerto Rican Boa	L	L	H	L	M	L	L	H
<b>Birds</b>								
Aleutian Canada Goose	M	M	L	M	H	H	L	L
Mexican Duck	L	L	H	M	H	H	M	M
Brown Pelican	L	L	H	M	H	H	L	L
California Condor	L	L	H	M	L	M	H	M
Southern Bald Eagle	L	L	H	H	M	H	M	M
American Peregrine Falcon	L	L	H	M	L	H	L	L
Arctic Peregrine Falcon	L	L	M	M	M	M	L	M
Masked Bobwhite	L	L	H	L	M	M	M	M
Whooping Crane	L	L	H	H	M	H	L	L
Puerto Rican Parrot	L	L	H	M	M	M	H	H





Species	Population size, structure, and trend	Area of occupied habitat	Vulnerability of habitat to disruption and encroachment	Availability of technology	Probability of success	Activities of other organizations	Dependence on NFS habitats	Priority
<u>Birds (cont.)</u>								
Red-Cockaded Woodpecker	H	H	H	M	H	M	H	H
Bachman's Warbler	L	L	H	L	L	L	H	H
Kirtland's Warbler	M	L	H	M	M	M	H	H
Puerto Rican Plain Pigeon	L	L	H	L	M	L	L	H
Puerto Rican Whip-poor-will	M	L	H	L	L	L	L	H
Crested Honeycreeper	L	L	H	L	L	L	L	H
Kauai Akiialoa	L	L	H	L	L	L	L	H
Kauai Nukupuu	L	L	H	L	L	L	L	H
Mau Nukupuu	L	L	H	L	L	L	L	H
Akiapolaau	L	L	H	L	L	L	L	H
Hawaii Akepa	L	L	H	L	L	L	L	H
Mau Akepa	L	L	H	L	L	L	L	H
Oahu Creeper	L	L	H	L	L	L	L	H
Mau Parrotbill	L	L	H	L	L	L	L	H
Ou	L	L	H	L	L	L	L	H
Nihoa Finch	L	L	H	L	L	L	L	H
Palila	L	L	H	L	L	L	L	H
Molokai Creeper	L	L	H	L	L	L	L	H
<u>Mammals</u>								
Indiana Bat	L	L	H	L	H	L	H	H
Utah Prairie Dog	L	L	H	L	M	M	M	M
Eastern Timber Wolf	M	M	H	M	M	H	H	M
Northern Rocky Mountain Wolf	L	L	M	L	M	L	H	H
Red Wolf	L	L	H	M	L	H	L	L
San Joaquin Kit Fox	L	L	H	L	M	L	L	M
Black-footed Ferret	L	M	H	M	M	M	M	M
Florida Panther	L	L	M	L	L	L	M	L
Eastern Cougar	L	L	M	L	L	L	M	L
Florida Manatee (sea cow)	L	L	H	M	M	H	L	L



December 3, 1974

Option A for distribution of funds  
in a research program on endangered species.

Station	Location	Increased Funds (\$1,000)		
		FY 1976	FY 1977	Total
PSW	Fresno	---	150	150
	Honolulu	150 ✓	300	450
INT	Bozeman	---	200	200
	Logan	---	300	300
RM	Rapid City	---	150	150
	Tucson	300	---	300
NC	Columbia	---	150	150
	St. Paul	185 ✓	75 —	261
SE	Clemson	300	---	300
	Lehigh Acres	---	150	150
ITF	Rio Piedras	75 ✓	150 —	225
Total		1,011	1,625	2,636

Option A was developed primarily upon the basis of the distribution of endangered species, tasks to be performed as described in the FS program proposal, the present distribution of RWU's in Wildlife, Range, Fish Habitat, and the centers of expertise in Fish and Wildlife Service and universities. We also attempted to concentrate the program increases at a limited number of locations. Only three locations--Honolulu, Rio Piedras, and St. Paul would need second increases.



U. S. Department of Agriculture  
Forest Service  
Honolulu, Hawaii

Appropriation Activity: Forest Research FY 1977  
Subactivity: Wildlife, Range, and Fish Habitat Research . . . . \$300,000

Funds are required for accelerated research related to conservation of threatened and endangered species of wildlife. Research will be performed by the Pacific Southwest Forest and Range Experiment Station in cooperation with the University of Hawaii. The work, an essential link in a Forest Service program, is closely coordinated with Fish and Wildlife Service, U. S. Department of the Interior.

The Endangered Species Act of 1973 requires the Forest Service to utilize its authorities to conserve such species and to insure that actions funded or carried out by the Agency do not jeopardize the species or their critical habitats. Research at Honolulu will accelerate conservation of the honey-creepers and other endangered birds living in Hawaiian forests.

These funds would provide for increasing the staff by four scientists plus an adequate supporting staff of technicians and other personnel. Also provided for is increased cooperative research effort through grants and contracts with universities and other research organizations.





DEPARTMENT OF CONSERVATION

STATE OFFICE BUILDING

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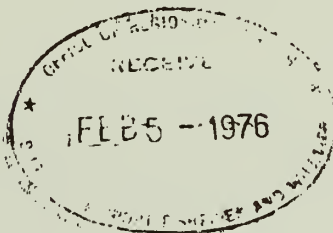
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Mr. Jack E. Hemphill  
U.S. Department of the Interior  
Fish and Wildlife Service  
Federal Building, Fort Snelling  
Twin Cities, Minnesota 55111

Dear Mr. Hemphill:

Thank you for the opportunity to review the draft plan for the recovery of the Eastern timber wolf.

We were made aware yesterday that the Maine Department of Inland Fisheries and Wildlife has not received a copy of the plan. We feel that the Department of Inland Fisheries and Wildlife should play an important role in formulating the State of Maine's position on the recovery plan and have taken the liberty of forwarding our copy of the document to them.

I am confident that their comments will be sent to you as soon as possible.

Meanwhile, this Department would like to ask the following questions regarding proposed future study directed toward recovering the wolf in specific parts of Maine:

1. Is there sufficient habitat for another large canid in Maine? Weights of our Eastern coyote compare with wolf weights in the Isle Royale study. Does the naturally present coyote already fill the biological niche which might be proposed for the Eastern timber wolf?
2. Spruce-fir is the predominant forest type in the proposed recovery areas. Is the quantity of hardwood available sufficient for optimum wolf habitat?
3. The plan calls for establishment in inaccessible areas where deer, moose and beaver are in good supply. Maine's highest deer populations are in relatively heavily populated areas. Would released wolves move to areas of high prey and human population?
4. Will heavy recreational use of the White Mountain National Forest engender conflicts between wolves and humans?





Page 2

Mr. Jack E. Hemphill

January 30, 1976

5. What caused the original loss of Maine's wolf population? Do those conditions still exist? Do the Maine lands mentioned as possible recovery sites meet the criteria set forth on page 4 of the report as critical to the wolf's long-range survival? Our particular concerns are with factors (1) (as addressed in question 3 above), (3) and (4). "Adequate understanding of wolf ecology and management" may be difficult to achieve in a State where proposals to place a bounty on the coyote have come close to becoming law. "Ecologically sound management" may be even more difficult if it involves restriction of deer hunting on private or public lands in order to maintain adequate prey for the wolf population.

Thank you again for the copy of the draft plan. The introduction of a formerly native species to his native range is an admirable objective.

Sincerely,

  
Richard E. Barringer  
COMMISSIONER

/bjg





# United States Department of the Interior

NATIONAL PARK SERVICE  
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

100-1076

Mr. Ralph Bailey  
Michigan Department of  
Natural Resources  
Region I Headquarters  
P.O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

We are pleased to provide you our comments regarding the Eastern Timber Wolf Recovery Plan which you have provided to us for review.

We believe the plan is well-conceived, objective, balanced, and in conformance with the Recovery Plan Guidelines. We commend the Recovery Team on its fine work. Our comments and questions, which follow, are not intended to distract from the plan, but were made in the hope that they may strengthen it.

Page 1, Introduction. What relationship, if any, exists between the Canadian and Minnesota-wolf populations? Does, or can, the Canadian population act as a reservoir for the Minnesota population? What is the legal status of the wolf in Canada? Seemingly, a direct relationship, if one exists, could affect management strategy.

Page 2, Present Range. What comprises suitable habitat for the wolf? Is its title "eastern timber wolf" apt nomenclature, or can the wolf frequent any relatively isolated areas with suitable prey? Answers to these questions would add perspective to consideration of range restrictions.

Page 3, primary range. A discussion of land ownership in the primary range would assist in assessing the threat of human encroachment into that range. The figure on page 42, illustrating sheep raising efforts in the area, would seem to indicate there is a real threat.

Page 7, Plan Objectives and Rationale. The plan states that an informational program to explain wolf ecology and management will lead to greater public acceptance of good management. While the description of "wolf ecology" is rather elastic, we suggest that something like "the role of the wolf in the ecology of the area" would be better.





Page 8, Recovery Plan Outline-Primary Objective and section No. 1. These important statements could be improved in that, taken by themselves, they suggest only a holding action. They tie the wolf population level intrinsically to the biological carrying capacity (feasibility, compatibility with man) as, if history is guide, that capacity inevitably erodes. Mention should be made that much of the plan is aimed at protecting or improving the carrying capacity.

Recovery Plan Outline, No. 2 - reestablishing populations. We suggest that this section should have a provision for habitat management or improvement in the event a transplant is successful.

Recovery Plan Outline, No. 3 - Isle Royale National Park. We suggest addition of a section to cover research into the habitat, to include study of successional changes, effects of fire, etc., although No. 33 - "Continued research on wolf ecology" is probably elastic enough to cover this.

Recovery Plan Outline, No. 121-31 - "Invite interested groups (pro, con and others) to a conference." We doubt that such a conference would be very successful. Perhaps a series of conferences would be helpful in getting all viewpoints, prejudices, etc., noted for evaluation.

Recovery Plan Outline, No. 122-4 - "Provide concerted law enforcement effort." This section could be further explained or strengthened by mention of applicable laws, responsibilities, etc.

Recovery Plan Outline, general. The outline is inconsistent in the amount of detail provided. For example, sections 111 and 112 provide no details on how comprehensive data on wolf life history factors and ranges will be gathered, while section 234 - "Deliver wolves to release point," includes section 234-1 - "Arrange shortest and most direct flight."

The plan-general. We believe the plan adequately discusses the reasons for the decline in wolf numbers and the requirements for its continued existence, namely relative isolation from man in large, wild areas, adequate prey, adequate habitat for the prey, management to retain and improve prey habitat and populations, possibly management to balance wolf and prey numbers, and public understanding of the problems. We also believe the plan confronts the prey management-prey habitat-wolf management-public understanding factors, although usually in general terms (which is probably adequate for a plan of this type), but we believe the portion covering the factor of human encroachment into wolf habitat could be strengthened. Sections 122-31 - "Encourage land

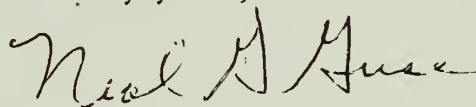


use regulations compatible with perpetuation of critical wolf habitat," and 122-32, which requires environmental statements, do not seem to us to adequately attack this problem.

We did not proofread the manuscript, but noted that the literature citation "Van Ballenberghe et al. 1975" (page 2) was not included in the Literature Cited section (Appendix E).

We appreciate very much the opportunity to review and comment on the plan. We would like to mention again that we believe it is an excellent plan, and our comments are intended only to possibly strengthen or clarify its contents.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Neil A. Huse". The signature is fluid and cursive, with a long horizontal stroke at the end.

Chief, Natural Resources





# Memorandum

TO : Regional Director, FWS, Twin Cities, MN

DATE: January 26, 1976

Deputy

FROM : Area Director, FWS, Anchorage, AK

SUBJECT: Comments on Draft Recovery Plan for Eastern Timber Wolf

A very thorough attempt has been made by the recovery team to anticipate all the needs and contingencies that may arise during the course of this effort. We have found only one area which we do not feel has been given enough attention: that of overcoming possible local opposition.

We have found on several occasions that any program dealing with the wolf is extremely sensitive, not only locally but nationally. Quite often, local sentiment is directly at odds with national feeling. For instance, on page 13 and again in the table on page 20 (Section II B), we feel the extent of local opposition to this program may be underestimated along with the amount of time and information//education effort needed to overcome it. Particularly under 223-2 on page 13, an effort continuing throughout the course of the program would probably be needed.

Particularly there is no mention of public relations or information action to be taken to counteract any predation on domestic animals that may occur. Apparently, the responsible wolves will be killed, but how adverse public reaction will be fielded is not explained. Also not clear is how a concerted anti-wolf drive would be handled.

We wish the recovery team good luck in this venture.



cc: Mr. Ralph Bailey







# United States Department of the Interior

## BUREAU OF INDIAN AFFAIRS

MINNEAPOLIS AREA OFFICE  
831 SECOND AVENUE SOUTH  
MINNEAPOLIS, MINNESOTA 55402

IN REPLY REFER TO:

Land Operations

JAN 28 1976

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters, P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

We are writing in response to Mr. Jack Hemphill's letter of December 19, 1975 requesting our review and comments on the recovery plan for the Eastern Timber Wolf. The document was carefully and thoughtfully organized with most of the factors involved in carrying out the plan receiving appropriate consideration. However, we suggest that the following items be considered and possibly addressed in the final plan.

In Appendix A, "Map of Proposed Timber Wolf Management Zones in Minnesota", it is noted that Zone 1B, Eastern Sanctuary Area, includes all of the Indian trust lands in the Grand Portage Reservation. Zone 1A, Western Sanctuary Area, includes a portion of the west half of the Nett Lake Reservation, most of the Red Lake Restored Ceded Lands, and a portion of the Red Lake Diminished Reservation.

We can find no reference in the plan of any contact or involvement with the Tribal Councils or Reservation Business Committees of these Reservations to ascertain if they wanted to be included in these sanctuary areas.

We would like to point out that some of the control measures planned for the sanctuary areas may be very controversial to the Indian people. For example: One proposed action under prey regulation was "to close deer season when pre-fawning deer populations within deer management units fall below 80 deer per wolf." How will the plan affect the Indian right to hunt free of State control? There is also a chance that increased wolf population might reduce deer numbers at some locations.

We strongly recommend that the authorities involve the Indian people in the early planning stages before the plan is finalized. If this is not done, this plan has very little chance for success on Indian trust lands.

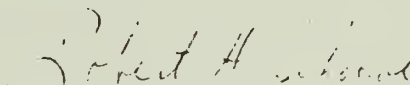


2.

We are interested in the plan and any future progress made in behalf of the wolf. Since much of the plan's action is aimed at improving habitat for other species, we find it contains information of use to us. We would appreciate being kept informed as the data becomes available.

If we can be of any assistance, please let us know.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert H. Johnson".

Area Director



STATE OF MICHIGAN



WILLIAM G. MILLIKEN, Governor

**DEPARTMENT OF NATURAL RESOURCES**

STEVENS T. MASON BUILDING, LANSING, MICHIGAN 48926

HOWARD A. TANNER, Director

**NATURAL RESOURCES COMMISSION**

CARL T. JOHNSON

E. M. LAITALA

DEAN PRIDGEON

HILARY F. SNELL

HARRY H. WHITELEY

JOAN L. WOLFE

CHARLES G. YOUNGLOVE

January 30, 1976

Mr. Ralph E. Bailey, Regional Wildlife  
Biologist - Region I  
P.O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

As requested by Regional Director Jack Hemphill of the U.S. Fish and Wildlife Service, I am writing you offering our comments on your recovery team's draft plan for the Eastern Timber Wolf.

Since the principal remaining population of the eastern timber wolf in the United States is the one in Minnesota, it obviously was a good decision in selecting team members to have individuals such as Dave Mech of the Fish and Wildlife Service and Biologist Rutske of the Minnesota Department of Natural Resources. The plan reflects the considerable knowledge already available about the wolf in that state where so much research has been done on it.

The various courses of action proposed in the plan seem well reasoned, realistic, and to have good potential for successful implementation. We note no serious differences in thinking about the proposition of reestablishing wolves in Michigan between proposals in this report and statements submitted in our Department's application for a Cooperative Endangered Species Program to the Department of the Interior last year.

To offer a modicum of possible dissent, I raise the question as to whether Michigan could ever again "live with" several packs of wolves distributed across all of the Upper Peninsula. Your plan does not specifically propose to try to achieve that, but it does show the entire Upper Peninsula as potential wolf range. I believe your team would as would we, be pleased to achieve success eventually to the extent of having even two thriving packs in the western half of the Upper Peninsula.

Regarding the classification under the Federal Endangered Species Act of the wolf in Minnesota, your investigations involved in drafting the plan should give you a proper perspective and knowledge for a sound judgement, and I think it is a matter of judgement. I can understand your support for a classification of threatened rather than endangered.





Mr. Ralph E. Bailey

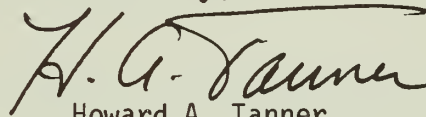
-2-

January 30, 1976

At the same time, I can understand Minnesota's concern about problems "too many" wolves can create for their people and the need for control. But since controlled harvest of a threatened species is provided for in the Federal Endangered Species Act, and since harvest of any significant number of eastern timber wolves in the United States would seem to demand careful control, we at this time stand in support of your recommendation to designate the species threatened in Minnesota. Should Minnesota's petition for complete declassification be honored, I believe we should not challenge that action. We would, however, strongly urge that there be regular and very careful monitoring of the Minnesota populations to prevent depletion to the point of endangerment.

In conclusion, I would commend you and the committee for a job well done.

Sincerely,

A handwritten signature in dark ink, appearing to read "H. A. Tanner". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Howard A. Tanner  
Director

cc Hemphill



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
North Central Forest Experiment Station  
Folwell Ave.  
St. Paul, Minn. 55108

2630  
January 26, 1976



Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters  
P.O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

Thank you for the opportunity to review the draft Recovery Plan for the Eastern Timber Wolf. We are impressed with both the quality and expertise of the TEAM and the effort put into this most difficult task.

It is difficult to comment on most technical aspects of the plan because the goals are broad, the techniques to achieve them are not detailed, and because the proposed actions appear logical if one accepts the assumptions made by the Team. The following are intended as constructive comments for the team's consideration in developing a revised draft.

It would be helpful to all who will read and review the plan to include a copy of the Endangered Species Act, a copy of the Secretary of Interior's directions to the Recovery Teams for the development of the Recovery Plan, and documentation of the Plan's review and approval process. One might question for example, whether it is the proper role of the Team to make a recommendation for the reclassification of a species from endangered to threatened or whether the recovery plan is a proper vehicle for this purpose. This action might also indicate a bias in the very development of the plan that will not be acceptable to some interest groups or the public at large.

The plan might achieve greater acceptance by agencies and the public if it was restructured to place primary emphasis on the recovery of wolf populations over various parts of its natural range where it has become extirpated (or nearly so) and secondary emphasis on maintenance of the Minnesota population. As the plan is now written, criticism that it is a maintenance plan rather than a recovery plan is inevitable.



It would be most useful to all agencies and the public for the team to outline critical habitat in other parts of the wolf's natural range in addition to Minnesota and Isle Royale, or are there no other critical habitats? It would also be helpful if the team clarified the issue of critical habitat and the question of whether the team should address itself to areas outside of those deemed critical habitat. For example, the management recommendations for those areas outside the proposed critical habitat in Minnesota and elsewhere could conflict with or at least limit other land management laws, regulations, and policies (Multiple Use Act, etc.). Does the Act fully apply to these areas? Isn't the team really designating critical and sort of "semi-critical" habitat areas in Minnesota? Should not this concept then apply to the full former range (or present potential range?) of the wolf? Also, if the full intent of the Act (return to and/or maintenance of viable population levels) applies outside of critical habitat areas, then the team's recommendation for reduced population levels based on social considerations is not valid (assuming that this population level is not a "viable" level).

And finally, on page 17 (A-6): The State of Minnesota has received funding to proceed with a survey to determine the feasibility of reintroducing the woodland caribou into Minnesota. Thus, they should be listed as the lead agency with cooperation from North Central.

I hope the above comments will be of some value in developing a Recovery Plan that will be acceptable to all interested in the welfare of Timber Wolf.

Sincerely,

*Clyde A. Fasih, Acting Director*

For  
JOHN H. OHMAN  
Director





STATE OF WEST VIRGINIA  
DEPARTMENT OF NATURAL RESOURCES  
CHARLESTON 25305

IRA S. LATIMER, Jr.  
Director

January 29, 1976

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

Mr. Hemphill's December 19, 1975 correspondence and recovery plan regarding the eastern timber wolf (Canis lupus lycaon) was referred to me by Director Latimer. My staff feels that the recovery plan is an excellent one and the recovery team should be complimented for their efforts. We have no specific comments at this time.

Since one area for reintroduction is partially within West Virginia, please keep us informed of the progress of this project.

If additional information is desired, please feel free to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Dan E. Cantner".

Dan E. Cantner, Chief  
Wildlife Resources Division

DEC/kw

cc: Santonas  
Hall  
Lesser  
Rinell  
Rawson







IN REPLY REFER TO:

# United States Department of the Interior

NATIONAL PARK SERVICE

Voyageurs National Park

P. O. Box 50

Int'l. Falls, Minn. 56649

February 5, 1976

Mr. Ralph E. Bailey  
Eastern Timber Wolf Recovery Team  
P. O. Box 190  
Marquette, Michigan 49855

Dear Mr. Bailey:

Thank you for the copy of the first draft of the Recovery Plan for the Eastern Timber Wolf.

I recommend that Voyageurs National Park be separated to the same degree that Isle Royale National Park is separated in the plan and not include the park in the boundaries of Zone 1B.

The primary reasons for this are that Voyageurs National Park is now a sanctuary for wildlife and some of the activities in the Recovery Plan Outline are not compatible with national park management. Of particular concern are activities which imply timber harvest and hunting.

The following is a suggested plan for Voyageurs:

- 4 Insure perpetuation of the Eastern Timber Wolf in Voyageurs National Park
- 41 Continue to provide complete protection
- 42 Continue management to perpetuate natural conditions
- 43 Conduct research as to the desirability of stocking wolves in the park
- 44 Conduct research as to the feasibility of re-establishing the woodland caribou in the park and implement action in accord with research conclusions



45 Monitor wolf populations

46 Monitor prey populations

We look forward to working with you on this project and good luck.

Sincerely,

A handwritten signature in cursive script, appearing to read "Myrl Brooks".

Myrl Brooks  
Superintendent





DEPARTMENT OF  
**INLAND FISHERIES AND GAME**  
STATE OFFICE BUILDING  
AUGUSTA, MAINE 04330

MAYNARD F. MARSH  
Commissioner

J. WILLIAM PEPPARD  
Deputy Commissioner

January 28, 1976

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters  
P.O. Box 190  
Marquette, Michigan 48955

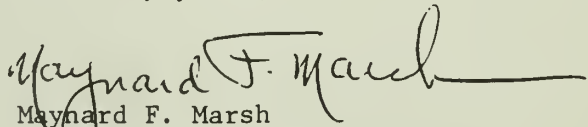
Dear Mr. Bailey:

This Department has indirectly obtained a copy of the draft recovery plan for the eastern timber wolf. Since we have had no experience with timber wolves in Maine we can offer few comments regarding its technical accuracy; however, we do wish to comment on the manner in which the plan has been presented to us.

Without prior consultation with this agency and, to the best of our knowledge, the adjacent State of New Hampshire, your team has suggested the establishment of wolves in Maine and has assigned the responsibility for various jobs to us. The assignment of jobs to State agencies cannot be taken lightly considering growing budget restrictions and limited manpower. Although the Endangered Species Act has provided for grant in-aid programs, no federal funds are available to implement them and it is unlikely that there will be either state or federal funds in the near future for work on non-game wildlife. Considering the current financial picture, the potential detrimental effect upon established native wildlife populations, and prevailing attitudes among our hunters and trappers which would make a wolf introduction socially unacceptable, I do not feel we can support the implementation of your proposed programs in Maine.

I would like to remind you that this Department has sole jurisdiction over the management of resident fish and wildlife in Maine and should be consulted in matters affecting our jurisdiction. Again it is unfortunate that plans have progressed this far without contacting us.

Sincerely yours,

  
Maynard F. Marsh  
Commissioner

MFM/gdd

cc: Howard N. Larsen, Regional Director, U.S.F.W.S.  
Keith Schreiner, Assoc. Director, U.S.F.W.S.



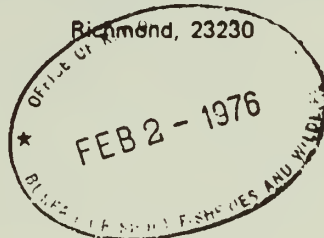


# COMMONWEALTH of VIRGINIA

## COMMISSION OF GAME AND INLAND FISHERIES

Box 11104

Richmond, 23230



January 30, 1976

CHESTER F. PHELPS, EXECUTIVE DIRECTOR  
4010 WEST BROAD STREET  
BOX 11104  
RICHMOND, 23230

Mr. Jack Hemphill, Regional Director  
United States Department of the Interior  
Fish and Wildlife Service  
Federal Building, Fort Snelling  
Twin Cities, Minnesota 55111

Re: P&A

Dear Mr. Hemphill:

We have reviewed the preliminary draft of the recovery plan for the eastern timber wolf as enclosed with your letter of December 19. This is a very interesting and informative document, and we certainly commend the effort that is being planned to manage the timber wolf in Minnesota and to establish an additional population. However, I am afraid that we in Virginia lack the professional familiarity with this species that would enable us to make any constructive criticisms or suggestions.

Sincerely yours,

*James F. McInteer, Jr.*  
James F. McInteer, Jr.  
Assistant Director

JFMc:pcf







# State of North Carolina

## Wildlife Resources Commission

RALEIGH, N. C. 27611

January 15, 1976

DE D. SANDLIN, JACKSONVILLE  
CHAIRMAN  
K. ANDERSON, NEWLAND  
LIAM C. BOYD, WINSTON-SALEM  
ACE E. CASE, HENDERSONVILLE  
A. HUNEYCUTT, LOCUST

CLYDE P. PATTON, RALEIGH  
EXECUTIVE DIRECTOR  
HENRY E. MOORE, JR., CLINTON  
JAY WAGGONER, GRAHAM  
DEWEY W. WELLS, CAMDEN  
V. E. WILSON, III, ROCKY MOUNT

### MEMORANDUM

TO: Ralph Bailey

FROM: Robert B. Hazel

SUBJECT: Draft Recovery Plan for the Eastern Timber Wolf

This is in response to the December 19, 1975 letter from Mr. Jack Hemphill, Regional Director of the U. S. Fish and Wildlife Service at Twin City, Minnesota, addressed to Mr. James E. Harrington, Secretary of the North Carolina Department of Natural and Economic Resources in which this state's comments are requested in regard to the above draft proposal.

We have studied the plan and commend it for implementation in those localities where such is found to be in consonance with existing land use capabilities. In our view, this does not include North Carolina. Human population distribution and land use in this state are such as to provide little if any, opportunity for re-establishment of the wolf without jeopardy to existing human interests.

In addition to a broadly-based livestock industry with elements in every county of the state, we are also in the process of establishing new deer herds. In many parts of the state there is strong sportsman concern about the impact of stray and free-ranging dogs on deer populations. In consideration of both agricultural and wildlife interests, it would be highly inappropriate to recommend the restoration of the timber wolf in North Carolina.

FBB:en

cc: Jack Hemphill  
James E. Harrington  
Dr. Cooper  
Cliff Bampton  
Bob Robinson

Reg. Mar.	Fish-Crt. Lakes
Asst. Reg. Mar.	Forestry
Auditor	Game
Bus. Exec	Information
Asst. Dir. Gen.	Land
Engineer	Mar. Fish
Const. Supt.	State
	State
Fire	State





IN REPLY REFER TO:

# United States Department of the Interior

6840 (360)

BUREAU OF LAND MANAGEMENT  
WASHINGTON, D.C. 20240

JAN 19 1976

Mr. Ralph Bailey  
Michigan Department of  
Natural Resources  
Region I Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

Thank you for your letter of December 19, 1975, concerning the recovery plan for the eastern timber wolf. We appreciate the opportunity to review it. We have only a few comments from this Office, but we are forwarding one copy of the draft plan to the Bureau of Land Management's (BLM) Eastern States Office for further review.

One matter which might be evaluated more fully in the recovery plan is the role of BLM-administered lands, including the team's recommendations and justifications for Federal retention of isolated tracts within the proposed critical habitat areas. In addition, it would be helpful to land management agencies if the team would further quantify the restrictions that might be placed on developments in the proposed critical habitat areas.

In general, be as explicit as possible relative to what the team would like the BLM to do on behalf of the eastern timber wolf.

Sincerely yours,

John E. Crawford  
Chief, Division  
of Wildlife

Reg. Mgr.		Fish and Wildlife
Asst. Reg. Mgr.		
Admin.		
Ext. Affairs		
Gen. Inv.		
Land Mgmt.		
Legal Coun.		
Plan. & Eval.		
Rec. Mgmt.		
Spec. Inv.		
Training		
Wildlife		
Wildland Mgmt.		





United States Department of the Interior  
FISH AND WILDLIFE SERVICE

MAILING ADDRESS:  
Post Office Box 25486  
Denver Federal Center  
Denver, Colorado 80225

STREET LOCATION:  
10597 West Sixth Avenue  
Lakewood, Colorado  
Across From Federal Center

IN REPLY REFER TO:

PA/1400:3

JAN 13 1976

Mr. Ralph E. Bailey  
Michigan Department of Natural Resources  
Region 1 Headquarters  
P.O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

This is in reply to your request for comments on the draft recovery plan for the Eastern timber wolf.

First of all, congratulations! It looks to us as if you have come up with a thorough and businesslike blueprint for the preservation of this subspecies.

Your plan is particularly interesting to us since we have the lead for the Northern Rocky Mountain wolf and many of the problems are similar. We were hoping you would hit the taxonomic question a little harder because it is so important to us. If your wolves are not a pure and distinct subspecies, there is a strong argument for reclassification to threatened or even declassification. If they are "pure," then it will certainly limit your imports and exports.

We have only a few comments to make, and perhaps they are not appropriate because they are mostly socioeconomic or biopolitical, rather than biological. They are as follows:

1. Could you preserve the subspecies with only zones 1A and 1B, and will you weaken the chances of getting them by asking for any concessions elsewhere in the state? Would removal of protection outside the primary range decrease opposition to total protection within?

2. Will Minnesota hunters accept eight deer per square mile (pre-fawning estimate) as a huntable population, or will the cries of "there ain't no deer" be raised and the blame laid on the wolves at even much higher population levels than eight per section?



3. We didn't total your estimated costs, but would release of these figures undermine your chances of success? Would prorating or assigning some of these costs to improving deer hunting, timber quality and other resources lessen criticism of these large proposed expenditures?

4. Has every possibility, including lottery permits, of public hunter and trapper taking of "excess" animals been explored in preference to removal by "government hunters"?

Perhaps these comments or questions are too elementary to be of any value, but we submit them for what they may be worth. Again, congratulations on your draft recovery plan - it is very impressive. So impressive, in fact, we hope you can spare a few extra copies for use by the recovery teams in this Region in formulating their drafts.

Sincerely,

A handwritten signature in cursive script, reading "Frank Richardson".

Acting Deputy Regional Director

cc:

Regional Director, Region 3 (SE)





Tennessee Department of  
**Conservation** Division of Planning & Development  
BLANTON - GOVERNOR 2611 West End Ave. Nashville, Tennessee 37203 (615) 741-1061  
ALLISON - COMMISSIONER WALTER L. CRILEY - DIRECTOR

January 14, 1976

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region I Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

Enclosed please find general comments concerning the "Recovery Plan for the Eastern Timber Wold". We would appreciate being kept informed of the progress of this project.

Thank you for the opportunity to comment on this matter.

Sincerely,

*Walter L. Criley*  
Walter L. Criley

WLC/dh



## COMMENTS ON ETW RECOVERY

1. The Tennessee Wildlife Resources Agency should be appraised of this document, especially page 32, "Areas to be Investigated in the Eastern United States for Eastern Timber Wolf Re-Establishment Possibilities" and page 36, paragraph 4, which discusses prey requirements of the ETW.
2. The lowest population density estimate of 1 person per square mile and areas free of human inhabitants estimates may need to consider the extremely high GSMNP visitor use (pg. 32, F).
3. The cost: return of re-introducing the ETW should be considered. The total proposed expenditure listed in "Schedule of Priorities, Responsibilities and Costs", pages 17-22, is \$3,998,000. This figure includes items which will not apply to re-introduction in TN, such as moose and caribou studies and first-run R and D costs. The cost of re-introduction will be high and perhaps other re-introduction programs should be given higher priority. The re-nesting of the Double-crested Cormorant and Anhinga are but two of several bird species that should be managed for returning of former nesting populations.
4. The impact of wolves vs. livestock, pg. 40, should be considered for TN.
5. Pg. 7, par. 3, I question the stated results of such a public information campaign, to wit: "The result will be much greater public understanding and acceptance of an ecologically sound, scientific wolf management program."

Perhaps a more appropriate predator re-introduction for Tennessee would be the alligator. The alligator is purported to be one of the beaver's natural predators.

6. Pg. 7, par. 4, last sentence indicates that natural ETW population limiting factors will be augmented by human intervention.

Such population manipulation could result in the species being managed solely and unwisely for hunters. This may be an expensive game species, especially if taxpayers money is used to re-introduce and further manage the ETW for hunters. I am confident that TWRA will closely scrutinize this possibility and not allow such unwise expenditures and practices.

Pg. 14, 242, expresses a telemetry tracking system. However, no mention is made of capturing the individual to replace batteries necessary for continued transmission. The frequency of replacement, method of recapture, and the potential effects of periodic recapture on the wolf should be considered. Professional competency of biologists monitoring these packs should also be acceptable.

## CONCLUSION

The cost: benefit for re-introducing the ETW in TN needs development and analysis. The cost seems high based on existing Agency and Department budgets.



A prolonged public education campaign will probably be necessary. The Recovery Report is recommending that the Minnesota Re-introductions and Educational Programs be initiated in 1976. TN public may require more lead-time.

The ETW is extirpated from the Southeast. It may not follow that re-introductions are possible. Inhabitant and visitor impact on the ETW in East Tennessee should be studied. Habitat modifications and other environmental changes, if any exist, may make the ETW re-introduction similar to an introduction of an exotic species.

The ETW Recovery Team is to be commended for their efforts in Minnesota.





January 23, 1976

Dr. Robert M. Linn  
Eastern Timber Wolf Recovery Team  
Biological Sciences  
Michigan Technological University  
Houghton, Michigan 49931

Dear Bob:

I found the Recovery Plan for the Eastern Timber Wolf a reasonable and well-researched document. The sanctuary areas appear adequate if prey populations are maintained as outlined. The maintenance of lower wolf densities in Zone 2 will minimize local adverse public reaction and livestock depredation, and public hunting and trapping would probably be the best method of regulation.

I have only a few comments:

- 1) How would wolves be removed in Zone 1A if deer numbers decline below those necessary to support 1 wolf/10 mi<sup>2</sup>. The recent experience in Alaska points up some of the public relations problems. Who would make this decision? I would recommend that the Recovery Team thoroughly review any such proposal should the need arise.
- 2) The goal of "maximizing" moose populations (122-54) seems rather vague. Moose management programs in Zones 1A and 1B should consider the impact of hunting on moose availability for wolves, especially if deer habitat improvement of the scale outlined is not accomplished. Such considerations are now being made on an experimental basis in Ontario. Harvests large enough to lower population age structure could adversely affect wolves, even though moose productivity might increase. To date there is no evidence indicating that wolves can prey significantly on young, healthy moose. When wolves have preyed extensively on young Isle Royale moose, research (by Durward L. Allen and myself at Purdue University) indicated unusual moose vulnerability stemming from malnutrition early in life.
- 3) Part IV (Critical habitat) describes what I regard as the most serious long-term threat to Minnesota wolf populations-- permanent changes in land-use patterns which increase human populations in Zones 1A and 1B. Mining developments should be watched most closely in this regard.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Rolf'.

Rolf O. Peterson  
Assistant Professor of  
Biological Sciences





UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

Box 985 Federal Square Station, Harrisburg, Pennsylvania 17108

January 23, 1976

Mr. Ralph Bailey, Recovery Team Leader  
Michigan Department of Natural Resources  
Region I Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

We have reviewed the draft Recovery Plan for the Eastern Timber Wolf as requested by Mr. Jack E. Hemphill and offer the following comments:

1. Page 5, para. 2 - "...villification of the species...." Should this be vilification?
2. Page 9, item 122 - "Establish wolf sanctuary with maximum wolf population ...." Would it be better to say optimum wolf population?
3. Page 9, items 122-112-1 and 122-112-2 - We suggest using available soils information as a basis for selecting areas for logging and intensive management.
4. Page 10, item 122-12 - What is the optimum carrying capacity of the winter range? It may be good to indicate the carrying capacity for each species.
5. Page 11, item 122-54 - "Regulate the taking of moose...to maximize their populations." It may be better to say increase populations to optimum size based on the carrying capacity of the range.
6. Page 15 - We suggest indicating the use of soils information for items 122-112-1, 122-112-2, 122-112-3 and 122-113.
7. Page 17, A. Research and Survey - Since the optimum number of wolves will depend on the carrying capacity of the range for deer and moose, it is suggested that this be determined by research and survey.
8. Page 18, Habitat Development Actions - We suggest using soils information for each of the actions specified in items 1 through 6.
9. Page 20, A. Research and Survey - We suggest that moose and deer carrying capacity be determined in addition to densities as indicated in item 2.





Mr. Ralph Bailey

2

10. Page 23, A. Research and Survey - We suggest adding two more items to this list. They are (1) Determine the carrying capacity of the range for deer and moose and (2) Obtain soil survey data.
11. Page 24, D. Maintenance of Wolf Population and Habitat, item 1 - We suggest adding the number of moose per square mile to this item.
12. Page 25, A. Research and Survey, item 2 - We suggest that determination of moose and deer carrying capacity be added to this item.

The Soil Conservation Service may be able to provide assistance with the recovery plan through one or more of the programs we administer; for example, we may be able to provide soil surveys and soils interpretative data. For more specific information I suggest that you contact:

Mr. Arthur H. Cratty, State Conservationist  
USDA, Soil Conservation Service  
Room 101, 1405 South Harrison Road  
East Lansing, Michigan 48823

We appreciate the opportunity to assist in the recovery effort of the Eastern timber wolf.

Sincerely,

  
Benny Martin  
State Conservationist

cc:

Arthur H. Cratty, State Conservationist, East Lansing, Michigan  
Harry M. Majors, State Conservationist, St. Paul, Minnesota  
Jerome C. Hytry, State Conservationist, Madison, Wisconsin





STATE OF NEW HAMPSHIRE  
FISH AND GAME DEPARTMENT

BOX 2003  
34 BRIDGE STREET  
CONCORD, N. H. 03301

BERNARD W. CORSON  
DIRECTOR


Reg. Mgr.		Fish Grt. Lakes
Asst. Reg. Mgr.		Forestry
Auditor		Game
Bus. Exec.		Information
Ass't. Bus. Exec.		Lands
Engineer		Law
Const. Supt.		Law-Comm. Fish
		Parks
		Naturalist
Fire		Waterways
Fish	January 5, 1976	
Fish-Const. Supt.		
File:		

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
Region 1 Headquarters  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

We appreciate the opportunity to review your preliminary draft of a plan to re-establish the timber wolf in various parts of the United States. We hope that any efforts on your part to bring timber wolves to western Maine and New Hampshire will be preceded by a careful evaluation of the role our newly established eastern coyote now plays in those areas of our state where you plan to introduce the timber wolf. It is our belief that there might be a conflict for food between these two closely related animals.

Sincerely,

  
Bernard W. Corson  
Director

BWC/sm

cc Maine Department of Inland Fisheries and Game  
White Mountain National Forest Supervisor

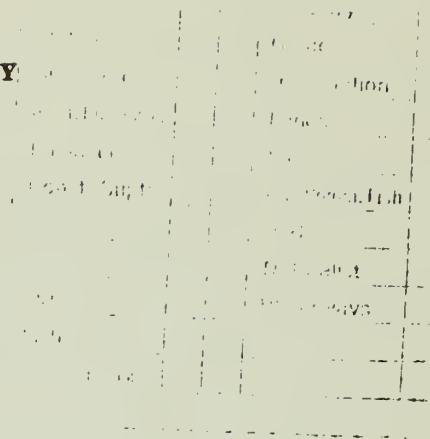


**NORTHERN MICHIGAN UNIVERSITY**

**MARQUETTE, MICHIGAN 49855**

DEPARTMENT OF BIOLOGY

January 13, 1976



Mr. Ralph Bailey  
Leader, Eastern Timber Wolf Recovery Team  
Department of Natural Resources  
Marquette, Michigan 49855

Dear Ralph:

Thank you for allowing me to comment on the discussion draft of the recovery plan. I think you and the team have done a very good job of organizing and planning. I would be happy to see the plan, as written, accepted so we could get on with implementing it as best we can. Since my comments were invited, however, I have found a few items that might be considered in developing a final plan.

My primary interest lies in Part 2, the reestablishment of wolves in suitable portions of their former range. The numbers which follow pertain to the equivalent sections of the plan:

P. 12, 2. There seems to be some inconsistency in mentioning Michigan and Wisconsin here on p. 12 as possible reestablishment sites but not mentioning them in Appendix B, except to show them on the map as current wolf range. To me the question of what to do in Michigan and Wisconsin is unclear, at least from Appendix B. If Michigan and Wisconsin are to be considered as potential reestablishment sites as I hope they are, and as noted on p. 12, I suggest some indication of this in Part 1 of Appendix B. Since there are a few wolves already present, at least in Michigan, perhaps special plans aside from reintroduction should be made for encouraging the increase of local wolves and immigrants. I suggest the following to be included in both Section 2 and Appendix B, under some heading that pertains to Michigan and Wisconsin:

1. Increasing and continuing efforts to obtain accurate information on wolf numbers and their distribution.
2. A public information and educational program.
3. A management program consisting of the following measures:





Mr. Ralph Bailey  
Page Two  
January 13, 1976

- a. removing the bounty on coyotes in Michigan.
- b. closing the season on coyotes for a few months each year.
- c. making it illegal to shoot any animal except a deer during the rifle deer season.

The rationale for these points is that wolves are killed for coyotes fairly frequently under varying circumstances.

I believe these measures are consistent with the Michigan Endangered Species Act of 1974 which gives protection to species which may resemble endangered species.

214. I am curious to know what public health problem is suggested here.

223. Obtaining support of local people. This is somewhat vague. What does "support" mean? What degree of support, that is, what proportion of people might be considered "support"? How would it be measured? Suppose a local sportsmen's group of 100 members is opposed but the local Audubon chapter of 50 members supports reestablishment of wolves. Is this support?

225. This line should be deleted.

2 (General). Since reintroducing timber wolves would require a federal permit and since it would have (I hope) significant environmental impact, perhaps somewhere in the planning, preparation of an environmental impact statement should be allowed for, both in timing and in budget.

I have other, minor, comments to make on the remainder of the report.

P. 2, last paragraph: I disagree with putting "A main focus" of a recovery plan on Minnesota, the place where the wolf is in least need of being restored. This could be construed as a political device to put emphasis of the plan in the area where success is most likely to be achieved. The Minnesota plans are not so much involved with recovery but more with management of existing populations.

P. 5, second paragraph. Item (3) is complex and the meaning is hard to discern, especially how such action would minimize vilification (misspelled) of the wolf.

PP. 7-8. I like the entire rationale. Some very good points made here.



Mr. Ralph Bailey  
Page Three  
January 13, 1976

P. 10, 122-21. The term "total legal protection" is somewhat vague. The next paragraph allows the taking of wolves. Can we have total legal protection and legal killing at the same time?

P. 11, 122-22. Was providing compensation to farmers for livestock losses considered, or perhaps purchasing lands from farmers located in critical areas and who suffer heavy losses?

P. 11, 122-3. I agree very strongly with this section.

P. 11, 122-53. I anticipate difficulties in public acceptance of not only protecting wolves but also giving them first priority on harvesting the deer!

P. 11, 123-4. Wording is awkward.

P. 13, 234-2. (Spelling)

P. 20, A.1 The target date of 1978 seems a little late. Why not 1977?

B.5 - Same comment. 1979 seems late.

P. 27, last paragraph. I believe environmental assessments must consider endangered species. But it does not hurt to mention it here.

Again, please accept my compliments for a job well done on a very complex subject. I hope very much that the plan will receive the support of all agencies and citizens involved.

Sincerely,



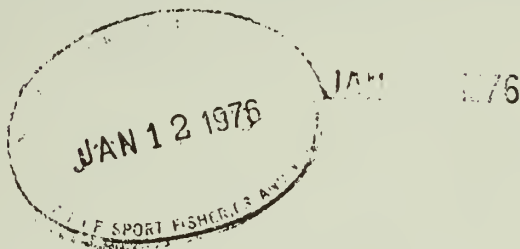
William L. Robinson  
Professor of Biology

WLR:wh





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
Post Office and Courthouse Building  
BOSTON, MASSACHUSETTS 02109



MEMORANDUM

TO : Regional Director, Fish and Wildlife Service,  
Twin Cities, MN

FROM : <sup>ACTING</sup> Regional Director, Fish and Wildlife Service,  
Boston, MA

SUBJECT: Eastern Timber Wolf Recovery Plan (Your memo of 12/19/75)

We have reviewed the recovery plan and offer the following observations, suggestions and questions:

1. Our main interest is in the section on reestablishment of Eastern timber wolf populations in former range, because five states in this region are listed as potential release sites. The team should be aware that selling the local people on a wolf release in any of these states will be a stiff proposition. The attached letter from Frank Gramlich in Maine, accurately describes feelings there, and we suspect that similar opposition would be encountered in other states.

2. If one or more of these states agrees to accept released wolves, consultants from these states should be appointed to the team.

3. Would the potential release sites be considered for designation as critical habitat, and if so, when would such designation be recommended?

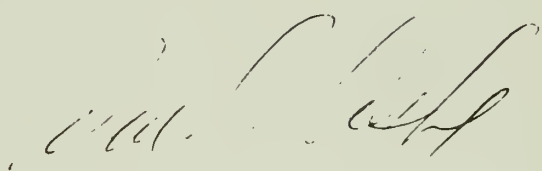
4. The team's estimates for funding parts A and B of Section II should be doubled.





5. In spite of our reservations, we think it is a good report, biologically feasible and well thought out. Let us know how we can help with implementation.

Attachment

A handwritten signature in dark ink, appearing to be "M. L. L.", is located in the upper right quadrant of the page. The signature is fluid and cursive, with a large, sweeping initial "M" and a long, horizontal stroke extending to the right.







UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

Division of Wildlife Services

Post Office Box 800

Augusta, Maine 04330

April 18, 1973

Mr. Denis Bassett  
43 Forest Park  
Portland, Maine 04101

Dear Mr. Bassett:

I believe we will meet in person before you receive this letter (it will not be typed until next Wednesday when my one-day-a-week office assistant is available). I do intend to attend the showing of "Death of a Legend" which is scheduled at Audubon on April 19.

Your interest in reestablishing the wolf in Maine coincides with an opinion I have held for many years--that the wolf deserves a place on the Maine fauna list. However, there are many obstacles to achieving that condition, and I believe several to be insurmountable. There is no certainty that there is space enough in Maine to establish a pack territory without crossing State or National borders. If a pack could be maintained in Baxter Park and possibly the townships bordering it, there might be a chance. But who could guarantee such stability. You and I might tolerate wolves in our backyard--we might overlook the taking of an occasional colt, cow or sheep--but it would seem several lifetimes too soon to expect the majority of Maine (and neighboring) people to accept it. Few biologists would fault the biological aspects of a few dozen wolves in Maine, but none would deny the political impracticality of attempting an introduction.

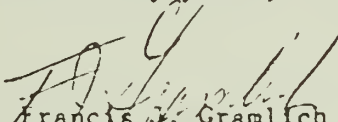
I have voiced the suggestion in public several times, have discussed it with several other biologists, and have generally concluded that the issue is a jousting with windmills. There are more pressing wildlife and environmental problems demanding attention and effort. A very real danger lies in alienating a large segment of the population whom we need to assist us in obtaining more immediately attainable goals.



Therein lies the value of our endangered species program--keep the wolves and cranes extant. If and when the majority cares enough to have them, management can and will provide them. I am certain that when the people of Maine--expressed by their Legislature and/or Department of Fish and Game--desire timber wolves for reestablishment, our Bureau will cooperate fully in providing them.

I believe a low-key program of education and discussion of the eastern timber wolf would be valuable at this time. Certainly there is much to be learned from Minnesota and Michigan. If we can learn to live a few years with the coyote, we might be able to get along with his larger cousin. If not, we might employ him for coyote control. The wolf is credited with extirpating the coyote on Isle Royale.

Sincerely yours,

  
Francis S. Gramlich  
State Supervisor  
Wildlife Services





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
Post Office and Courthouse Building  
BOSTON, MASSACHUSETTS 02109

Reg. Mgr.				Forestry
Asst. Reg. Mgr.				Game
Auditor				Information
Bus. Exec.				Lands
Ass't. Bus. Exec.				Law
Engineer				Law Comm. Fish
Const. Supt.				Parks
				Natural Hist.
				Waterways
Fire	75			
Fish				
Fish-Const. Supt.				
File:				

MEMORANDUM

TO : Regional Director, Fish and Wildlife Service,  
Twin Cities, MN

FROM : Regional Director, Fish and Wildlife Service,  
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5. In spite of our reservations, we think it is a good report, biologically feasible and well thought out. Let us know how we can help with implementation.

Robert C. Ashe

Attachment







# DEPARTMENT OF THE INTERIOR

## FISH AND WILDLIFE SERVICE BUREAU OF SPORT FISHERIES AND WILDLIFE

### Division of Wildlife Services

Post Office Box 800  
Augusta, Maine 04330

Reg. Mgr.		Fish Gr. Lakes
Asst. Reg. Mgr.		Forestry
Auditor		Game
Bus. Exec.		Information
Ass't. Bus. Exec.		Land
Engineer		Law
Const. Supt.		Off. of Cons. & En.
April 18, 1973		Public
Fire		Natural Hist.
Fish		Waterways
Fish-Const. Supt.		
File:		

Mr. Denis Bassett  
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Portland, Maine 04101

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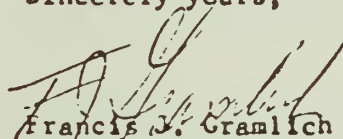
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Sincerely yours,



Francis J. Gramlich  
State Supervisor  
Wildlife Services





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

17 EXECUTIVE PARK DRIVE, N. E.

ATLANTA, GEORGIA 30329

Mr. Ralph Bailey  
Michigan Department of Natural Resources  
P. O. Box 190  
Marquette, Michigan 48955

Dear Mr. Bailey:

Our comments on the Draft Recovery Plan for the Eastern Timber Wolf follow. We have included a couple of editorial items.

Page 2, 2nd paragraph - The reference "Young and Goldman" is recorded in Literature Cited - appendix E as "Goldman".

Page 2, last paragraph - Reference "Van Bullenberghe et. al. 1975" is not found in the Literature Cited - appendix E.

Pages 10 and 15, item 122-13; page 17, item A.6; and pages 18 and 24, items CH. 7 and 8. - Why is a caribou transplant in a recovery plan for the wolf? Is it to supply an additional necessary food source that would not be competitive with present prey populations? If so, will success mean an increased carrying capacity for wolves? Will the population goals in the plan then be revised accordingly? In short, if a caribou transplant is not a needed part of a recovery plan for the wolf, it should be eliminated from the plan. If it is needed, the rationale behind this should be presented in the narrative part of the plan.

Pages 11 and 15, item 122-53; pages 12 and 15, item 123-44; pages 18 and 24, item CP. 1; and pages 19 and 24, item D.4 - What will closing or adjusting the deer season do? The problem is the habitat and any decrease in the deer population will reflect habitat problems. The emphasis in such a case should be on improving the habitat not restricting the hunter. Upon evaluating the text of the recovery plan it would be more logical to reduce the wolf population instead of restricting hunters because recent evidence is available that wolves may have accentuated a deer decline. There apparently is no such evidence concerning hunters. I assume that given the type habitat and deer population you have in Minnesota hunters regulate



themselves and hunter kill simply reflect the status of the deer population.

Pages 11 and 15, item 123; and pages 19, item D.4 - A deer population of 10 per square mile does not agree with Mech's correspondence on page 37 of Appendix C, nor item 123-44 which is 2.5 deer per square mile. Ten per square mile is a greater density than recommended for the sanctuaries (8 per square mile).

Pages 12 and 15, item 212; pages 13 and 15, item 221; and pages 20 and 25, items A.2 and B.1 - In transplant of wolves into former range the possible prey may be entirely different than what is prey in Minnesota. For example, in the southern Appalachians, the only prey, of the three listed, of any consequence is the white-tailed deer. But what about other possibilities? The national forests and the Smoky Mt. National Park in Tennessee and North Carolina contain populations of wild hogs. Would not they be suitable prey? What about smaller mammals?

Pages 12 and 15, item 214; and pages 20 and 25, item A.4 - What could be the possible effect on human health of a transplant? Rabies would be the only disease or parasite transmitted from wolves to man that I can think of that would be of any consequence and it is already well-established in other mammal populations in the areas considered.

Since the overall objective in any recovery plan is to improve the status of the animal until it is no longer endangered, or threatened, should not the final item in the recovery plan be to provide for down-listing of the species by recommendation of such with appropriate justification, once population goals are achieved. In fact, you apparently have already done so with the Minnesota population. Should not this be a part of the recovery plan?

Page 19, item CH.1 - \$500-\$700 thousand dollars seems like an erroneous figure for promoting certain logging practices. Promotion of proper techniques takes very little funding. However, carrying out these activities involves considerable funds.

Page 27 - Critical habitat determinations includes specification of actions permissible and prohibited within the critical habitat zone. Therefore this section needs to be expanded to do this. What can and can not be done in areas 1A and 1B and in Isle Royale?







I hope these comments prove helpful.

Sincerely yours,

*Ray S. Vaughan*

Regional Director



1 2 6 5 3

April 14, 1976

INTERIOR

The Secretary of the Interior  
Washington, D.C. 20240

Dear Sir:

I have been a member of a number of wolf protection organizations for quite a few years and have many papers on wolf behavior, life style, and habitat adaptation. I acquired this information over the years by starting with John Muir's early studies of the wolf and then continuing on with papers and pamphlets published by Pimlott, Mech and Seenlund and other modern day biologists. I have never personally had the opportunity to observe wolves in wilderness areas but I have been able to visually observe them in a sanctuary area.

I would like to make some comments and suggestions in regard to the preliminary drafts of the recovery plan for the Eastern Timberwolf. My first comment concerns the proposed reintroduction of the wolf in six areas located in Maine, New Hampshire, New York, West Virginia, Virginia, Tennessee and North Carolina. The reclassifying of the wolf from endangered to threatened before a viable population of wolves can be established in those chosen areas and that a maximum of prey animals will continue to exist in these habitats will help to destroy the remaining remnants of the Eastern Timberwolf rather than reestablish it.

The previous experimentation of reestablishing wolves in the upper peninsula of Michigan met with disaster when all the wolves were destroyed by man in a short period of time. What magic formula does this recovery team perscribe to prevent the destruction of the wolves which they propose to relocate in the six areas? My first suggestion to the team is to use a sensible approach.

After the reintroduction of wolves in the proposed areas, the Interior Department should allow a one year period during which the Eastern Timber wolf would remain on the endangered species list. If after that period of time it was proven that viable wolf populations continued to exist in these newly established areas, and only after confirmation by the recovery team that this was the case should the wolf be reclassified as threatened. Did the FDA reclassify Red Dye #2 and a non usable product BEFORE they used exhaustive tests for many years to prove it caused cancer? It is impractical to reclassify any product or experiment until it has been proven.



The plan for Minnesota which indicates 11,418 square miles of North East Minnesota to be a sanctuary and classified into 1A and 1B zones is the only stipulated area in Minnesota as being a sanctuary. What provision is there for strict law enforcement in the 3 zones of Minnesota to protect the wolf from hunting and trapping, in zones one and three at all times and in zone two during the three months allowed killing time, to limit the kills to the amount quoted by the recovery team? To cover two peripheral ranges or zones and zone 3 which covers the rest of the state beyond a doubt does not merit reclassifying the Eastern Timber Wolf from endangered to threatened.

No.1 There is no way that wolf packs will not range across the peripheral boundaries of the established zones since wolves require very large tracts of wilderness land for hunting purposes depending on available prey species. Federal and State Wildlife Commissions should concentrate on providing adequate prey in these areas first. Instead we find that the recovery team endorses and/or condones a three hunting and trapping season in zone two which includes wolf kills under the predator control program and illegally taken wolves which is estimated by the recovery team to be a total of 220 wolves.

How do they arrive at that figure? It is difficult at best to estimate the total wolf population in a given area. Mech admits this and so do many other authorities. What provisions are being made to provide strict law enforcement of the no hunting and trapping in zones one and three? What wildlife team will monitor the 3 month hunting and trapping season in area two? How do they propose to count and keep the wolf kill to the estimated 220? Who can account for the wounded animals who later die in remote areas? Even if you could accurately record the 220 kills in the first month of the hunting and trapping season would you ban hunting for the remaining two months or continue to kill?

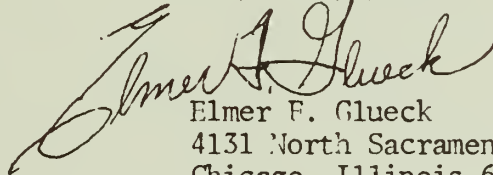
Only in the rhetoric of the Minnesota Department of Natural Resources would you allow an indeterminant amount of killing of an animal you are striving to reestablish and while in the process of killing this species you reduce his protection from endangered to threatened. I therefore plead with you to:

1. Keep the wolf on the endangered species list until an established viable population has proved its survival over a years period of time in the 6 established areas.
2. Have the recovery team file an environmental impact statement in regard to the 6 reestablished areas in the 6 states and also the 3 zones in Minnesota. This statement should include the status and reasonable estimate of the amount of existing wolves in each zone or area.



3. No hunting or trapping season should be opened on the wolf in any zone or area while the Eastern Timber Wolf is listed on the endangered species list or the threatened list. Reduction of a species which is endangered or threatened is contrary to preservation of any given species and serves only a vested interest monetary gain. At present the wolves habitat has been reduced by 97%. How can you condone his status being reduced to threatened when they are not even successfully reintroduced in any of the 6 new areas? To make a change at this time is to hasten the extinction of the wolf rather than to enhance his survival.

Very truly yours,

A handwritten signature in cursive script, reading "Elmer F. Glueck". The signature is written in dark ink and is positioned to the left of the typed name and address.

Elmer F. Glueck  
4131 North Sacramento Avenue  
Chicago, Illinois 60618







